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Chau et al.

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(54) **USER INTERFACE FOR ACTIVITY STATUS AND HISTORY**

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(73) Assignee: **Google Inc.**, Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 195 days.

(21) Appl. No.: **13/334,003**

(22) Filed: **Dec. 21, 2011**

Related U.S. Application Data

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(51) **Int. Cl.**
G06F 17/30 (2006.01)

(52) **U.S. Cl.**
CPC ***G06F 17/30699*** (2013.01); ***G06F 17/30035*** (2013.01); ***G06F 17/30867*** (2013.01)

(58) **Field of Classification Search**
CPC G06F 17/3064; G06F 17/3097; G06F 17/30029; G06F 17/30035; G06F 17/30699
USPC 707/722, 730, 748
See application file for complete search history.

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2011/0125678 A1 * 5/2011 Partridge 706/12
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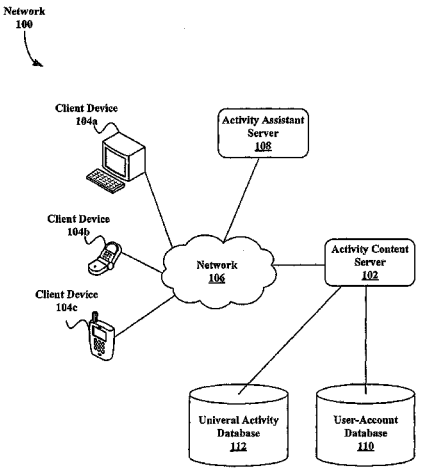
(57) **ABSTRACT**

Some configurations of the subject technology provide a user interface including an activity-creation display configured to create a first activity of several activities, and a single-activity display configured to display a single activity of the several activities, and information related to a list of users associated with the activity. The single-activity display includes a parameter-entry display configured to select a parameter for the single activity and to send a signal to the single activity corresponding to the selected parameter, a heads-up display configured to send a heads-up message about the single activity to a user, a location display configured to display information related to a location of the single activity, a status indicator configured to display a status based on the status parameter of the single activity, and a status-entry display configured to, upon selection, send a signal to change the status indicator of the single activity.

19 Claims, 23 Drawing Sheets



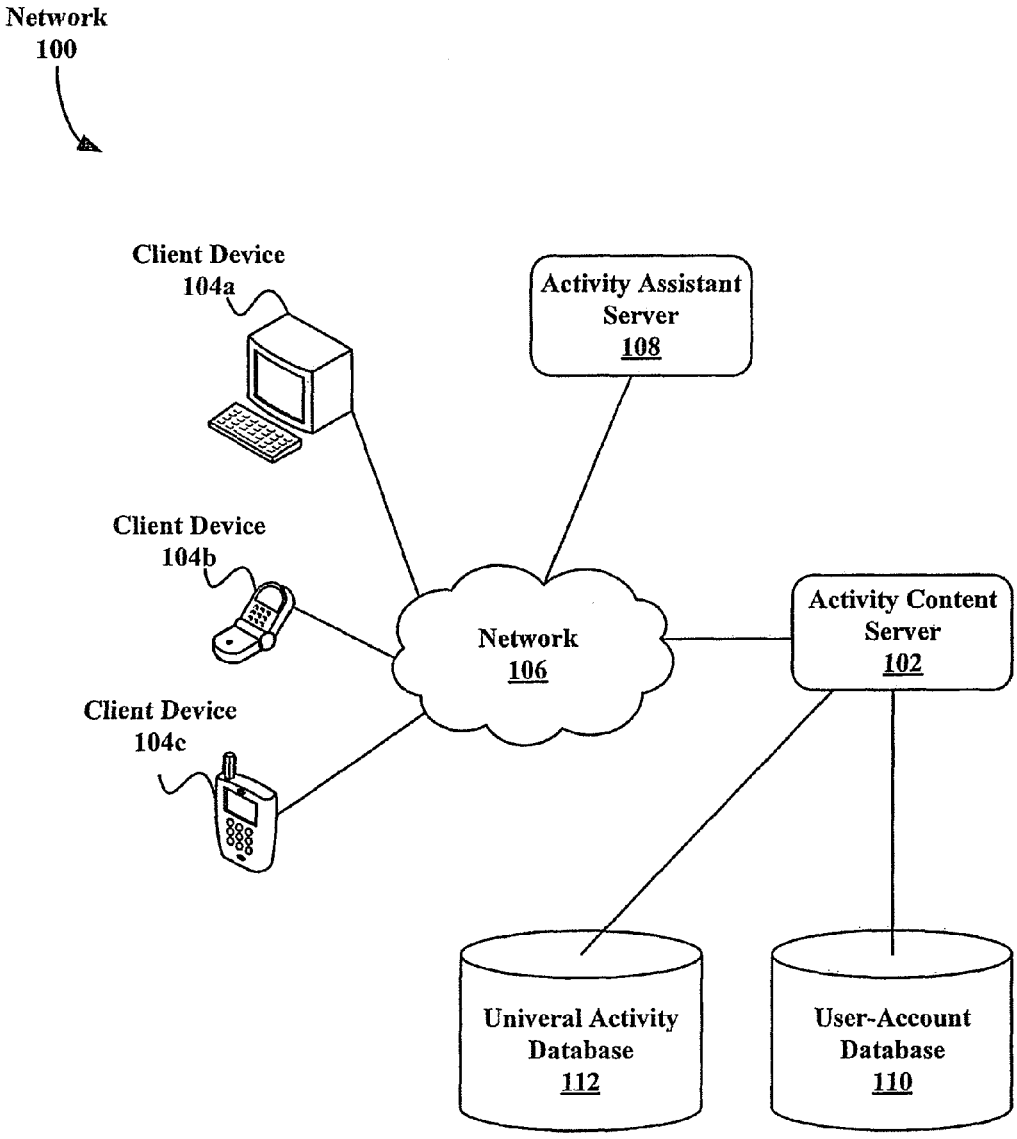

Network
100
Client Device
104a
Activity Assistant
Server
108
Client Device
104b
Network
106
Activity Content
Server
102
Client Device
104c
Univeral Activity
Database
112
User-Account
Database
110

FIG. 1

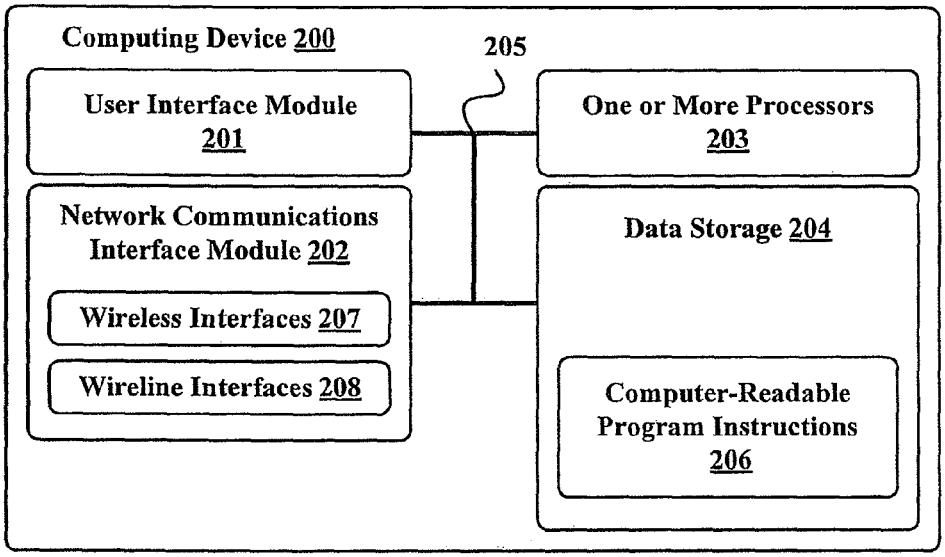

Computing Device 200
205
User Interface Module 201
One or More Processors 203
Network Communications Interface Module 202
Wireless Interfaces 207
Wireline Interfaces 208
Data Storage 204
Computer-Readable Program Instructions 206

FIG. 2A

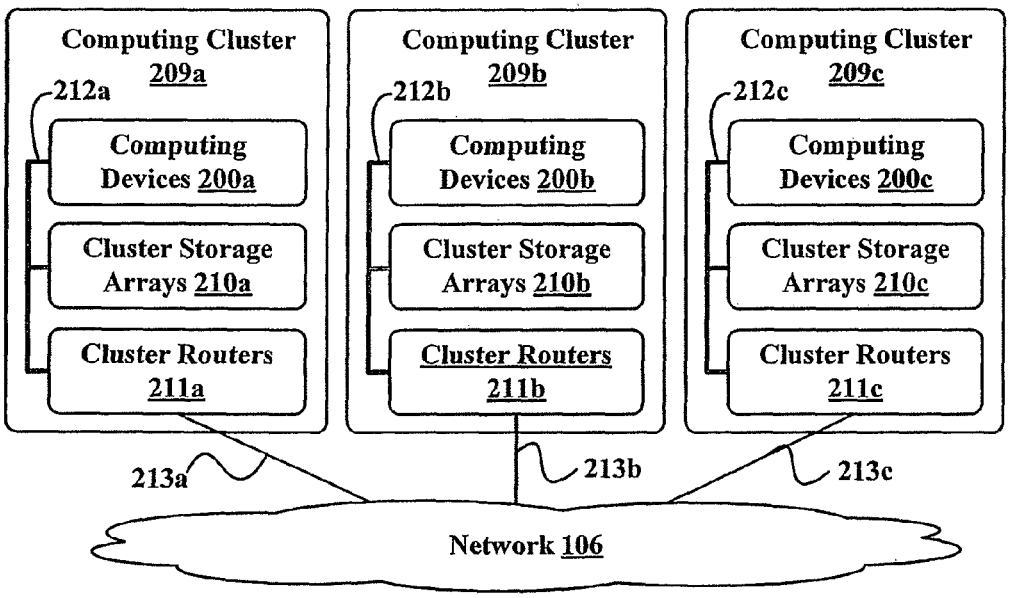

Computing Cluster 209a
212a
Computing Devices 200a
Cluster Storage Arrays 210a
Cluster Routers 211a
Computing Cluster 209b
212b
Computing Devices 200b
Cluster Storage Arrays 210b
Cluster Routers 211b
Computing Cluster 209c
212c
Computing Devices 200c
Cluster Storage Arrays 210c
Cluster Routers 211c
213a
213b
213c
Network 106

FIG. 2B

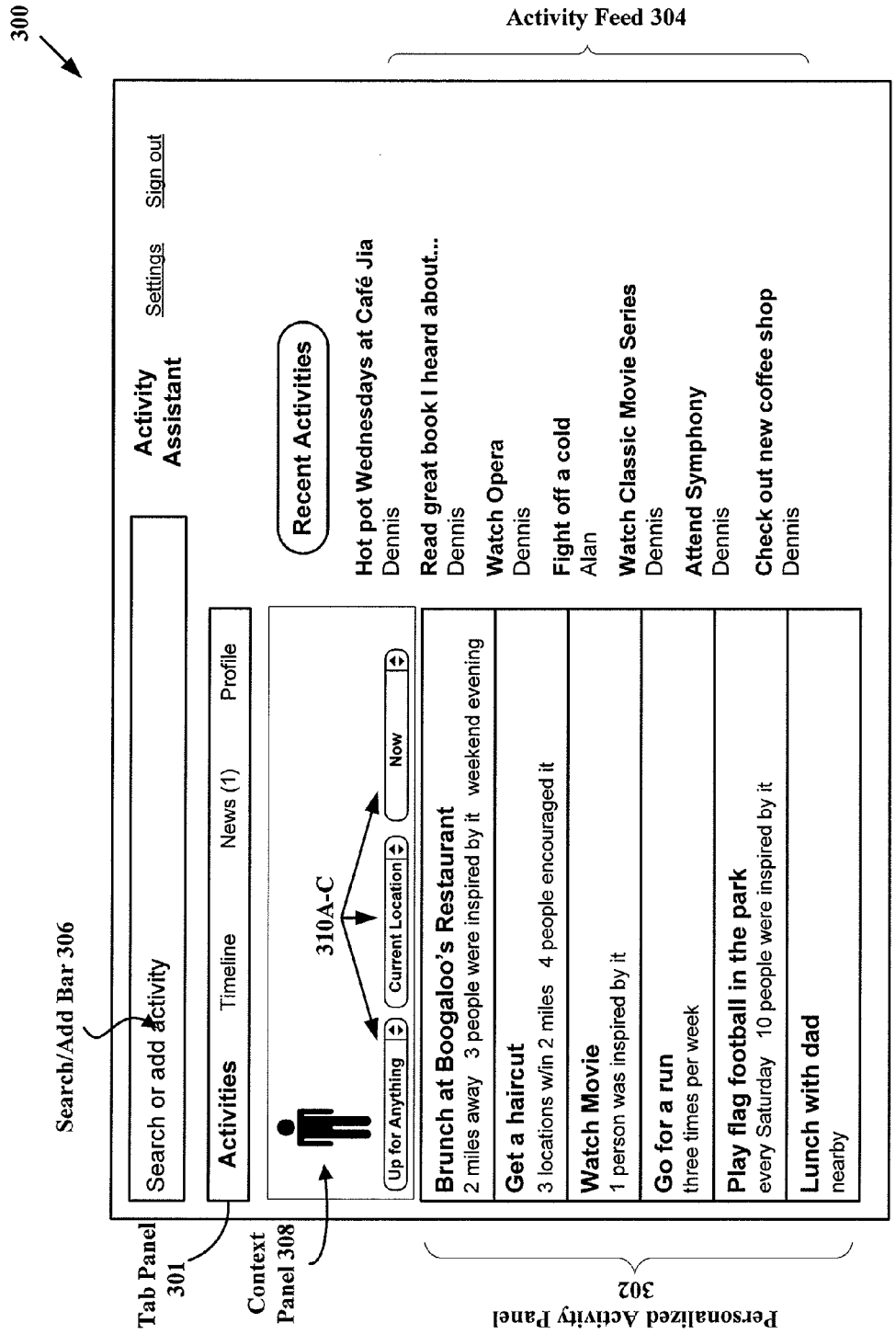

300
Activity Feed 304
Search/Add Bar 306
Search or add activity
Activity Assistant
Settings
Sign out
Activities
Timeline
News (1)
Profile
Recent Activities
Hot pot Wednesdays at Café Jia
Dennis
Read great book I heard about...
Dennis
Watch Opera
Dennis
Fight off a cold
Alan
Watch Classic Movie Series
Dennis
Attend Symphony
Dennis
Check out new coffee shop
Dennis
310A-C
Up for Anything
Current Location
Now
Brunch at Boogaloo's Restaurant
2 miles away 3 people were inspired by it weekend evening
Get a haircut
3 locations w/in 2 miles 4 people encouraged it
Watch Movie
1 person was inspired by it
Go for a run
three times per week
Play flag football in the park
every Saturday 10 people were inspired by it
Lunch with dad
nearby
Tab Panel 301
Context Panel 308
Personalized Activity Panel 302

FIG. 3A

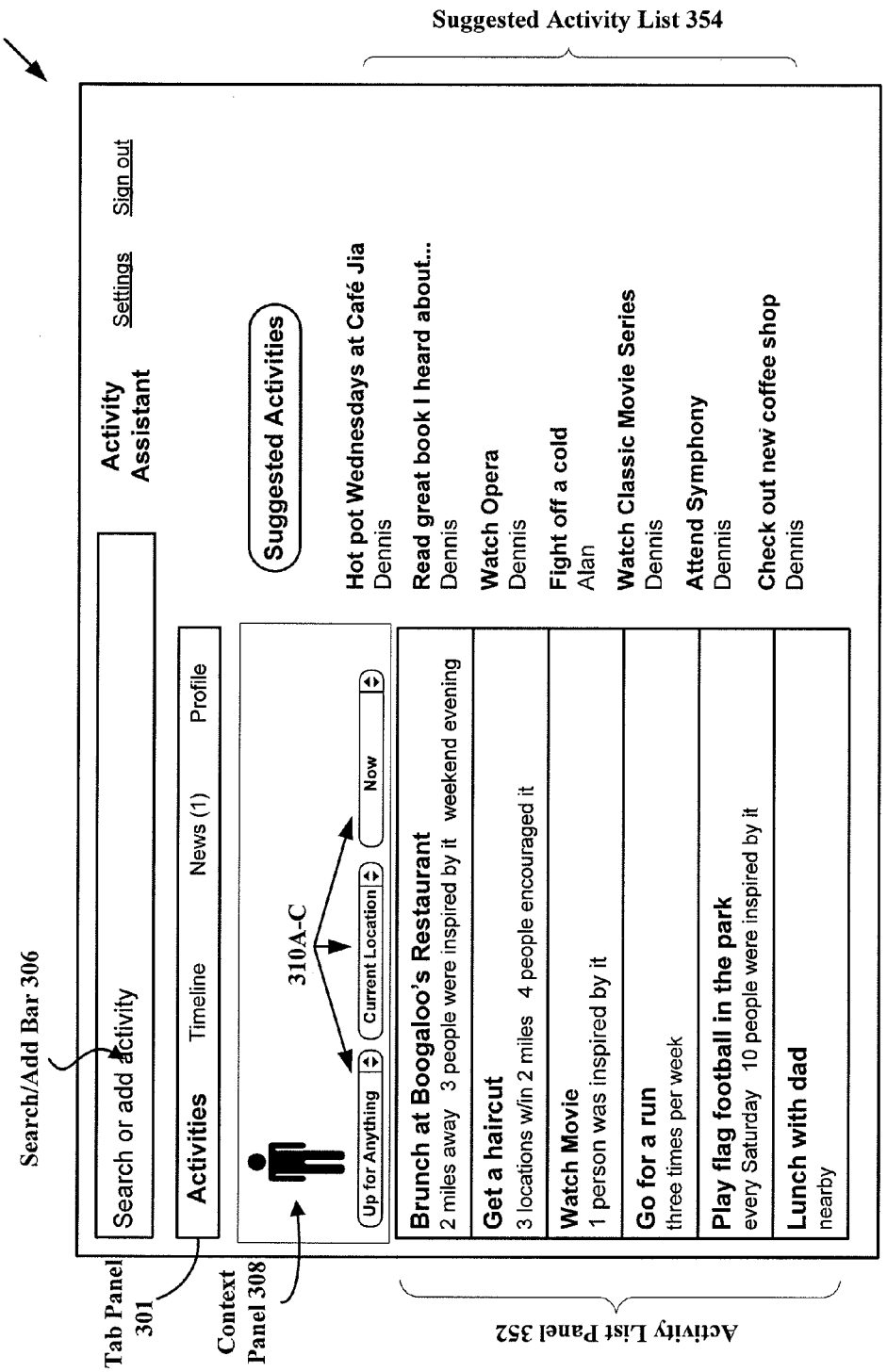

350
Suggested Activity List 354
Search/Add Bar 306
Search or add activity
Activity Assistant
Settings
Sign out
Activities
Timeline
News (1)
Profile
Suggested Activities
310A-C
Up for Anything
Current Location
Now
Hot pot Wednesdays at Café Jia
Dennis
Read great book I heard about...
Dennis
Watch Opera
Dennis
Fight off a cold
Alan
Watch Classic Movie Series
Dennis
Attend Symphony
Dennis
Check out new coffee shop
Dennis
Brunch at Boogaloo's Restaurant
2 miles away 3 people were inspired by it weekend evening
Get a haircut
3 locations w/in 2 miles 4 people encouraged it
Watch Movie
1 person was inspired by it
Go for a run
three times per week
Play flag football in the park
every Saturday 10 people were inspired by it
Lunch with dad
nearby
Tab Panel 301
Context Panel 308
Activity List Panel 352

FIG. 3B

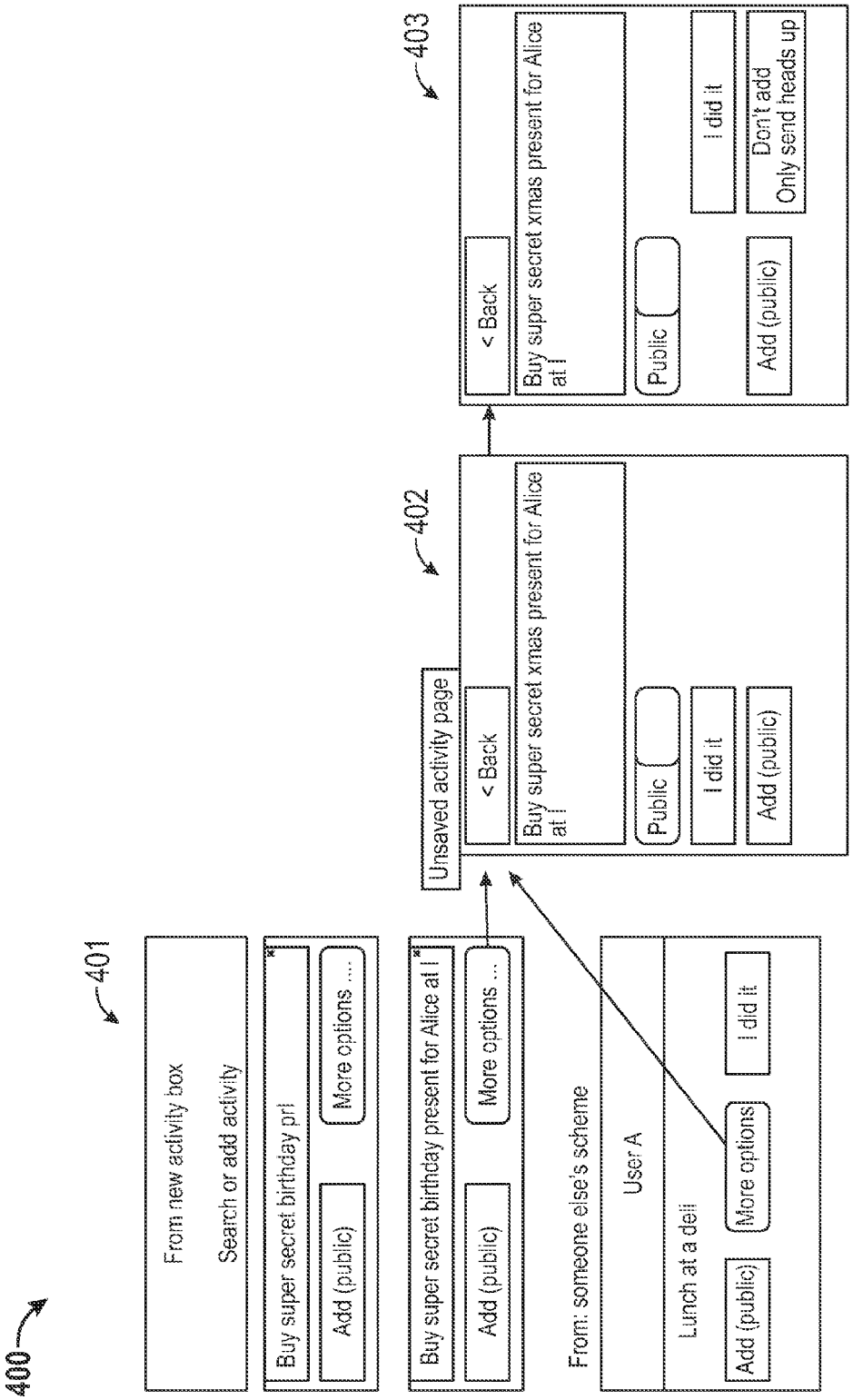

400
401
From new activity box
Search or add activity
Buy super secret birthday pri
Add (public)
More options ...
Buy super secret birthday present for Alice at I
Add (public)
More options ...
From: someone else's scheme
User A
Lunch at a deli
Add (public)
More options
I did it
402
Unsaved activity page
< Back
Buy super secret xmas present for Alice at I
Public
I did it
Add (public)
403
< Back
Buy super secret xmas present for Alice at I
Public
I did it
Add (public)
Don't add
Only send heads up

FIG. 4

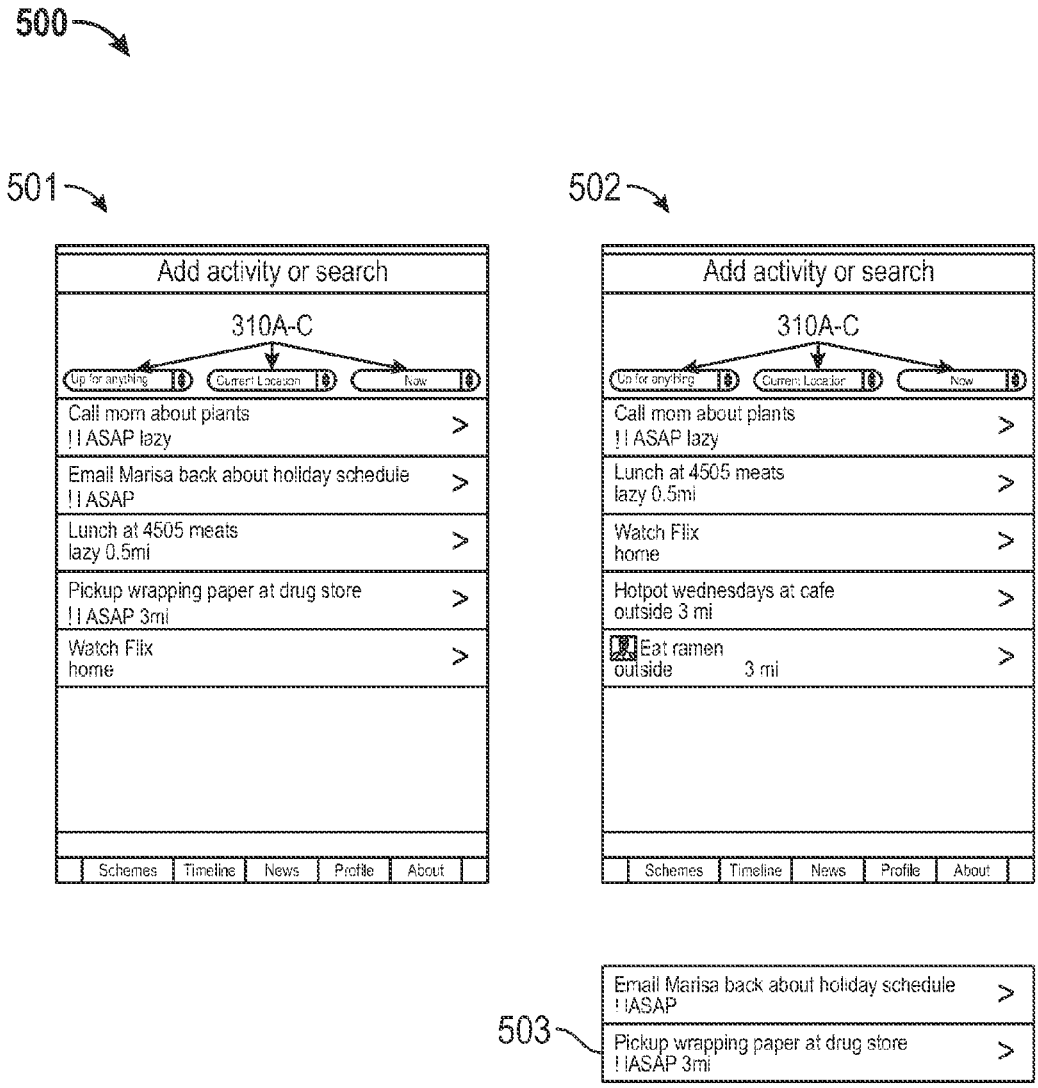

500
501
Add activity or search
310A-C
Up for anything
Current Location
Now
Call mom about plants
!! ASAP lazy
Email Marisa back about holiday schedule
!! ASAP
Lunch at 4505 meats
lazy 0.5mi
Pickup wrapping paper at drug store
!! ASAP 3mi
Watch Flix
home
Schemes
Timeline
News
Profile
About
502
Add activity or search
310A-C
Up for anything
Current Location
Now
Call mom about plants
!! ASAP lazy
Lunch at 4505 meats
lazy 0.5mi
Watch Flix
home
Hotpot wednesdays at cafe
outside 3 mi
Eat ramen
outside 3 mi
Schemes
Timeline
News
Profile
About
503
Email Marisa back about holiday schedule
!! ASAP
Pickup wrapping paper at drug store
!! ASAP 3mi

FIG. 5

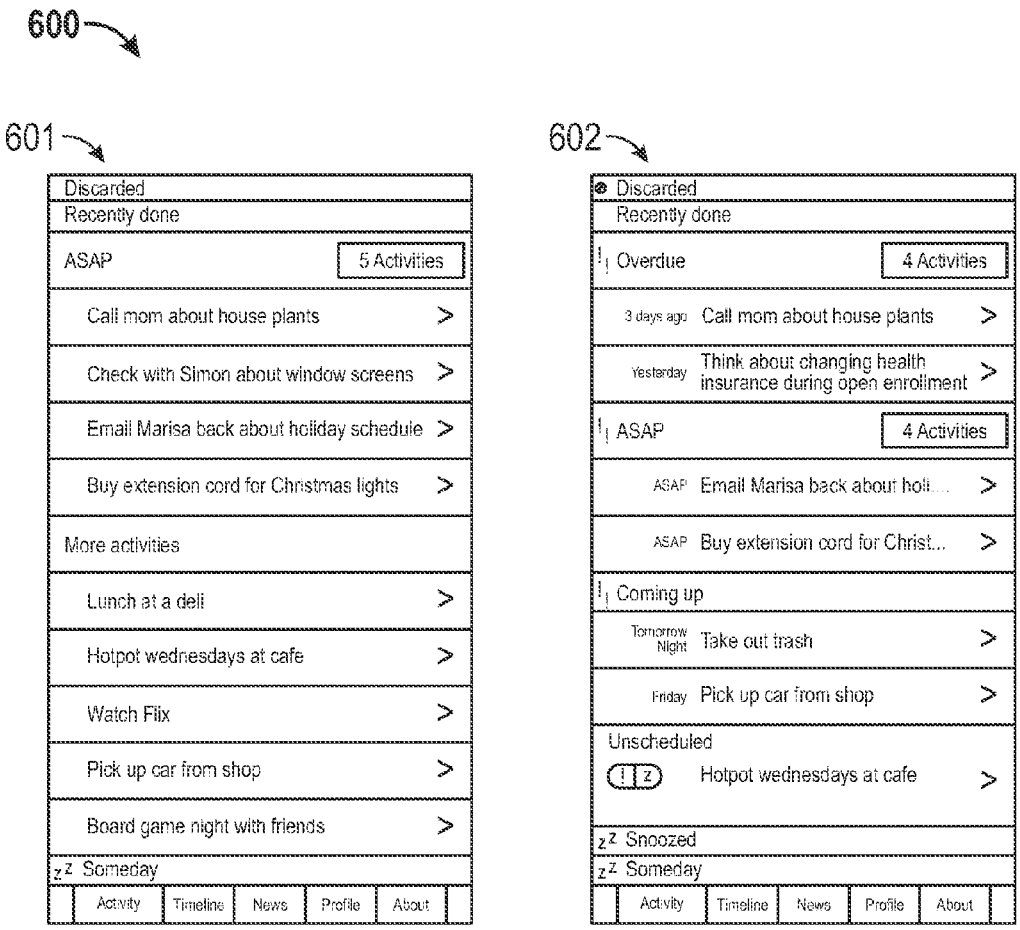

600
601
Discarded
Recently done
ASAP
5 Activities
Call mom about house plants
Check with Simon about window screens
Email Marisa back about holiday schedule
Buy extension cord for Christmas lights
More activities
Lunch at a deli
Hotpot wednesdays at cafe
Watch Flix
Pick up car from shop
Board game night with friends
Someday
Activity
Timeline
News
Profile
About
602
Discarded
Recently done
Overdue
4 Activities
3 days ago
Call mom about house plants
Yesterday
Think about changing health insurance during open enrollment
ASAP
4 Activities
ASAP
Email Marisa back about holi...
ASAP
Buy extension cord for Christ...
Coming up
Tomorrow Night
Take out trash
Friday
Pick up car from shop
Unscheduled
Hotpot wednesdays at cafe
Snoozed
Someday
Activity
Timeline
News
Profile
About

FIG. 6

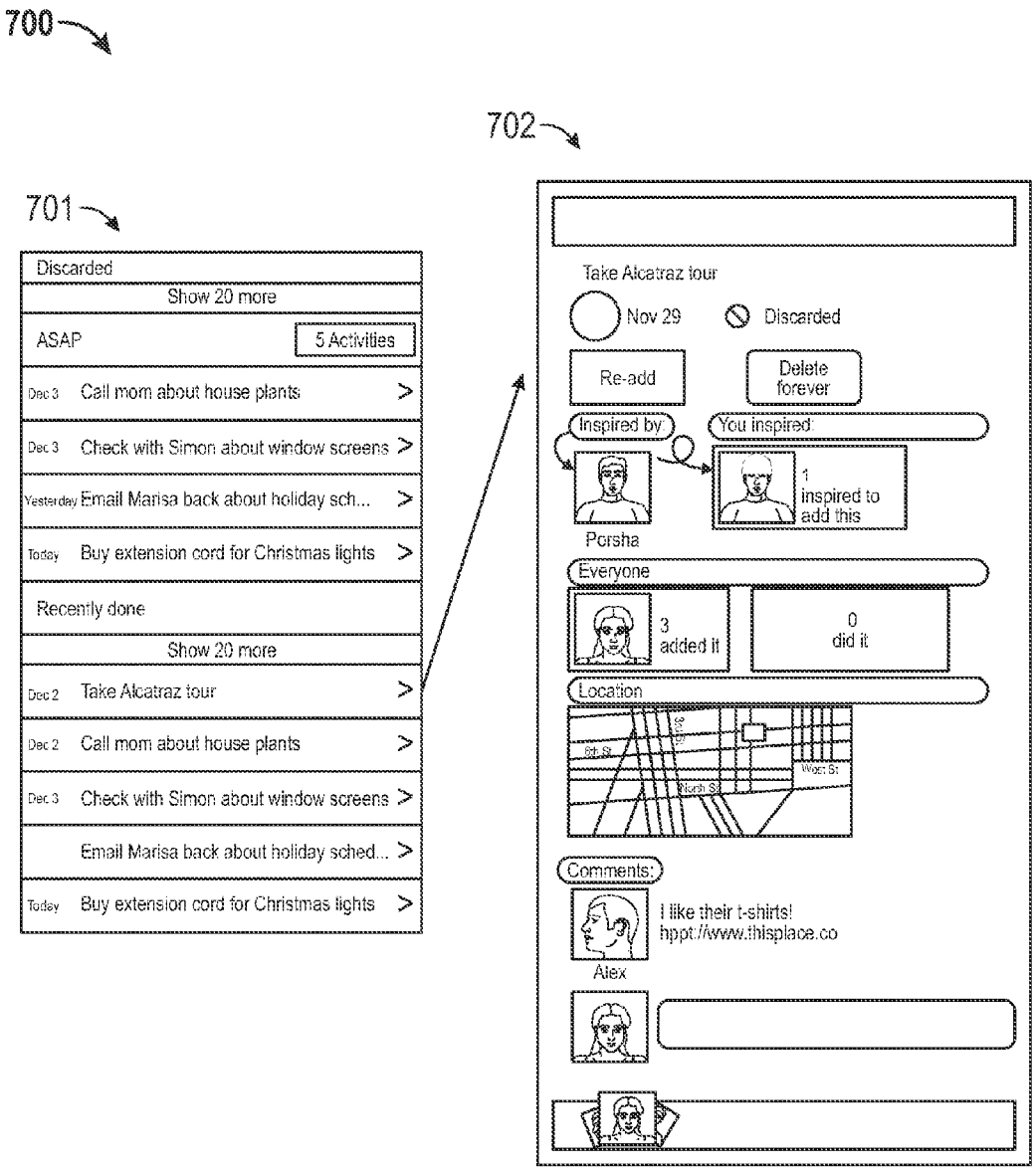

700
701
Discarded
Show 20 more
ASAP
5 Activities
Dec 3 Call mom about house plants >
Dec 3 Check with Simon about window screens >
Yesterday Email Marisa back about holiday sch... >
Today Buy extension cord for Christmas lights >
Recently done
Show 20 more
Dec 2 Take Alcatraz tour >
Dec 2 Call mom about house plants >
Dec 3 Check with Simon about window screens >
Email Marisa back about holiday sched... >
Today Buy extension cord for Christmas lights >
702
Take Alcatraz tour
Nov 29
Discarded
Re-add
Delete forever
Inspired by
You inspired
Porsha
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments:
I like their t-shirts! hppt://www.thisplace.co
Alex

FIG. 7

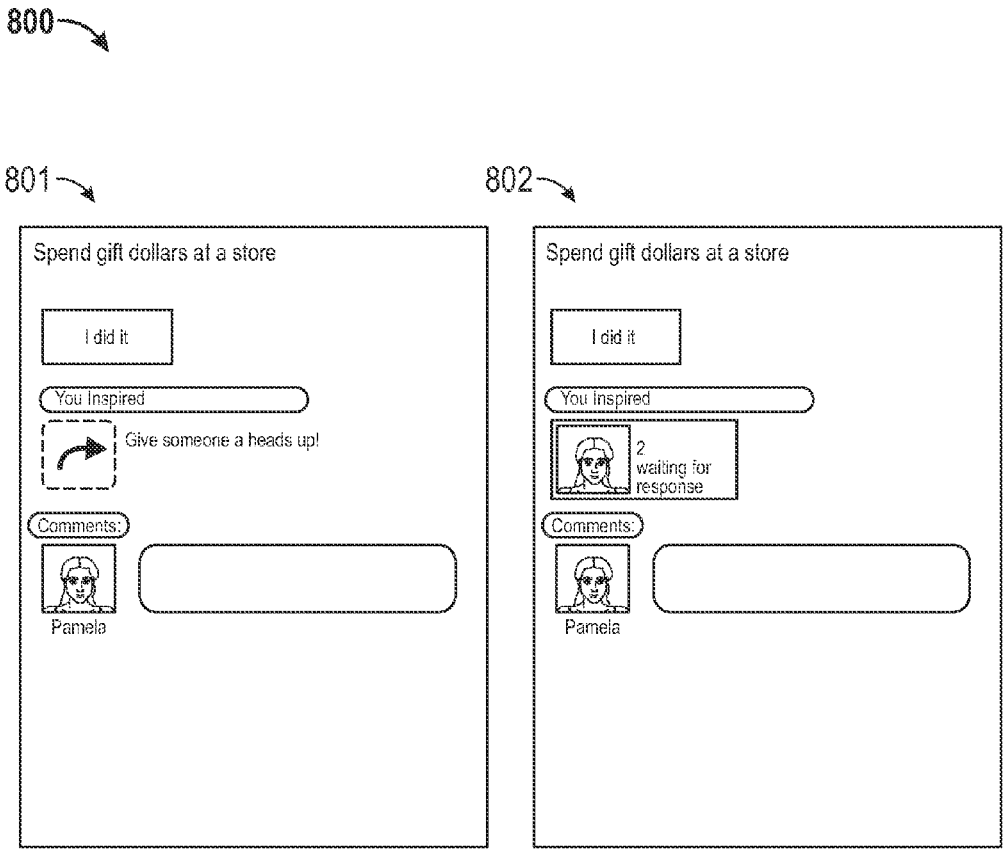

800
801
802
Spend gift dollars at a store
I did it
You Inspired
Give someone a heads up!
Comments:
Pamela
Spend gift dollars at a store
I did it
You Inspired
2
waiting for
response
Comments:
Pamela

FIG. 8

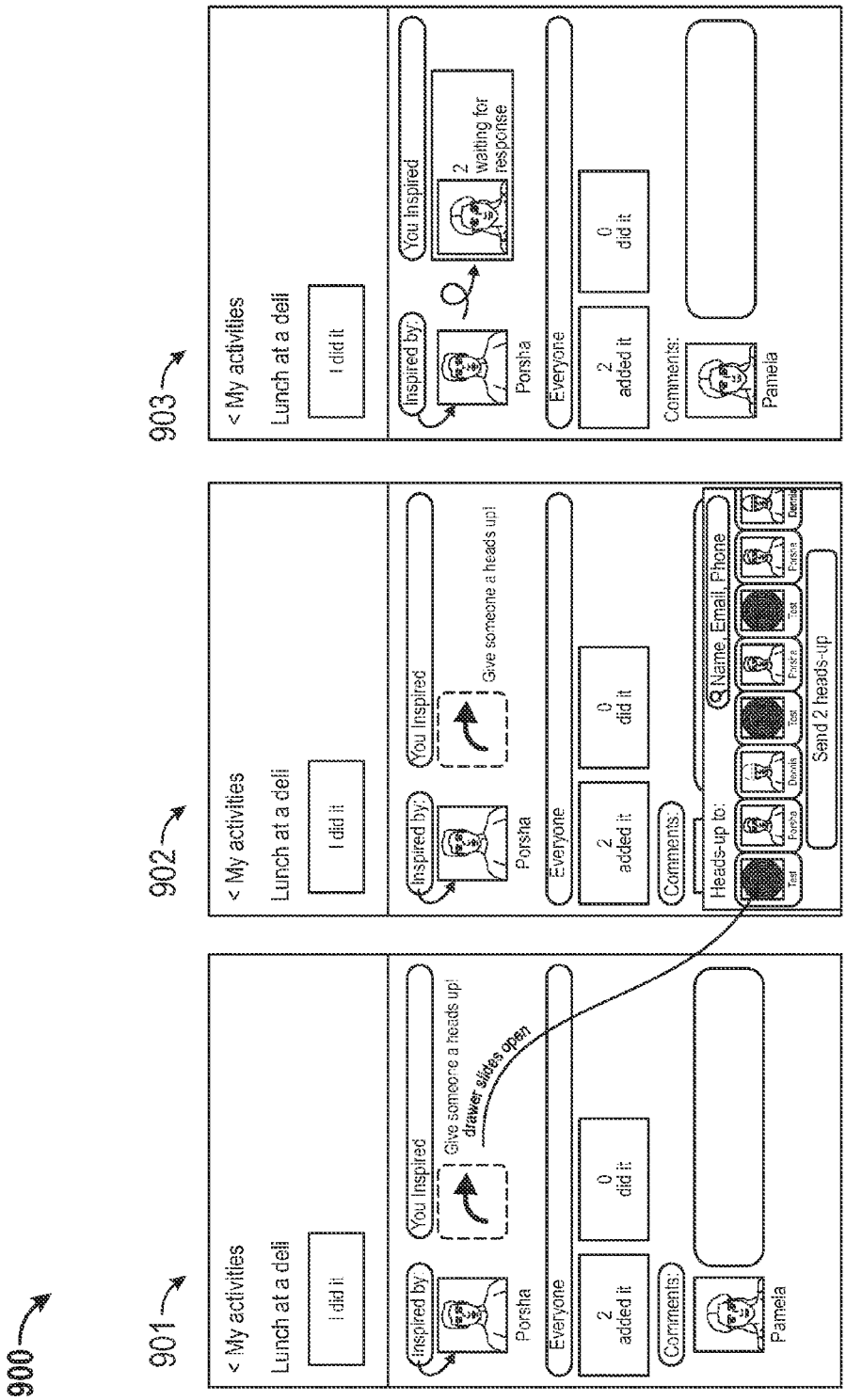

900
901
902
903
< My activities
Lunch at a deli
I did it
Inspired by:
Porsha
You Inspired
Give someone a heads up!
drawer slides open
Everyone
2 added it
0 did it
Comments:
Pamela
Heads-up to:
Name, Email, Phone
Send 2 heads-up
2 waiting for response

FIG. 9

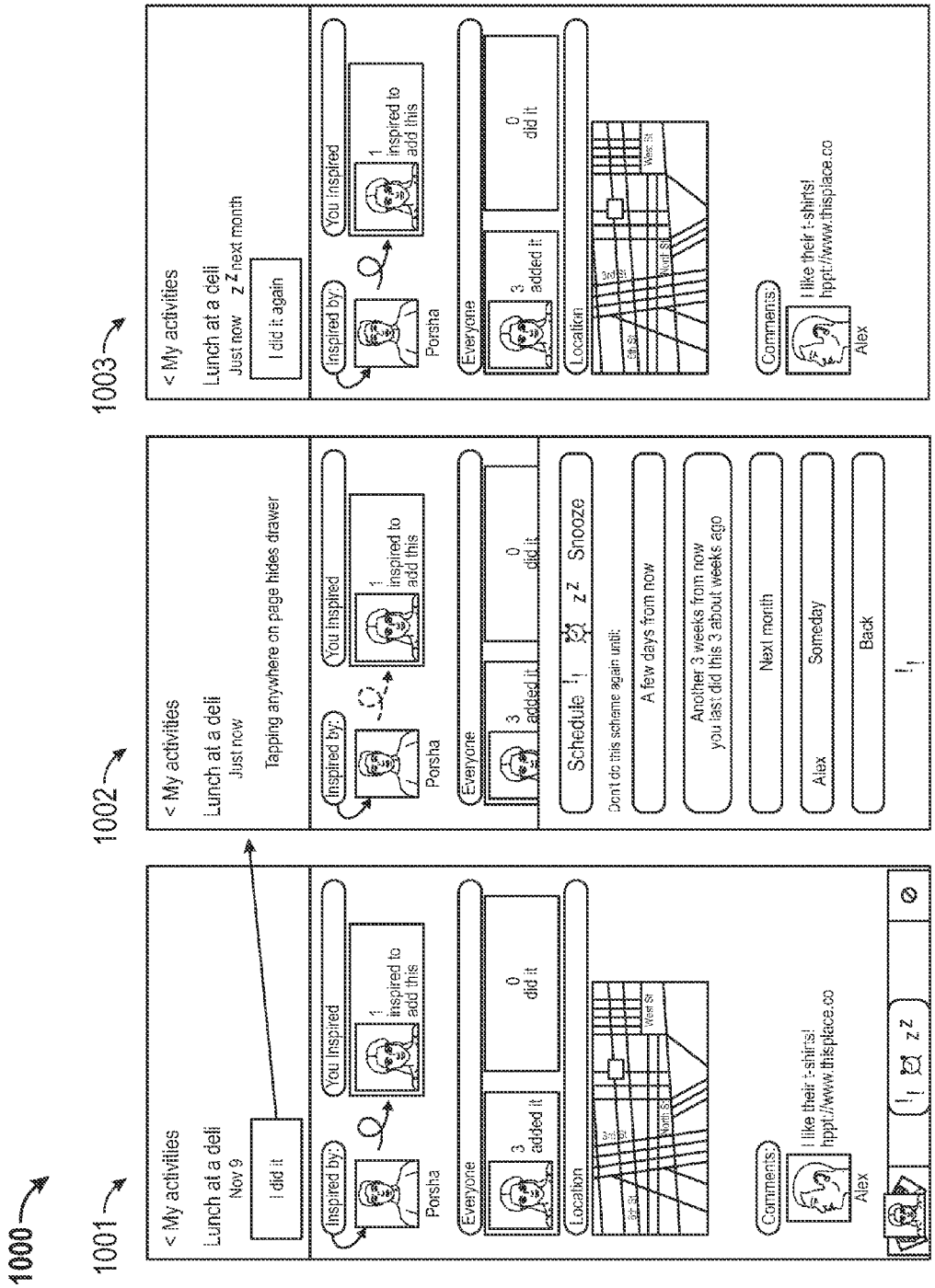

1000
1001
1002
1003
< My activities
Lunch at a deli
Nov 9
I did it
Inspired by:
Porsha
You inspired
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments:
I like their t-shirts!
hppt://www.thisplace.co
Alex
Just now
Tapping anywhere on page hides drawer
Schedule
Snooze
Don't do this scheme again until:
A few days from now
Another 3 weeks from now
you last did this 3 about weeks ago
Next month
Someday
Back
I did it again
next month

FIG. 10

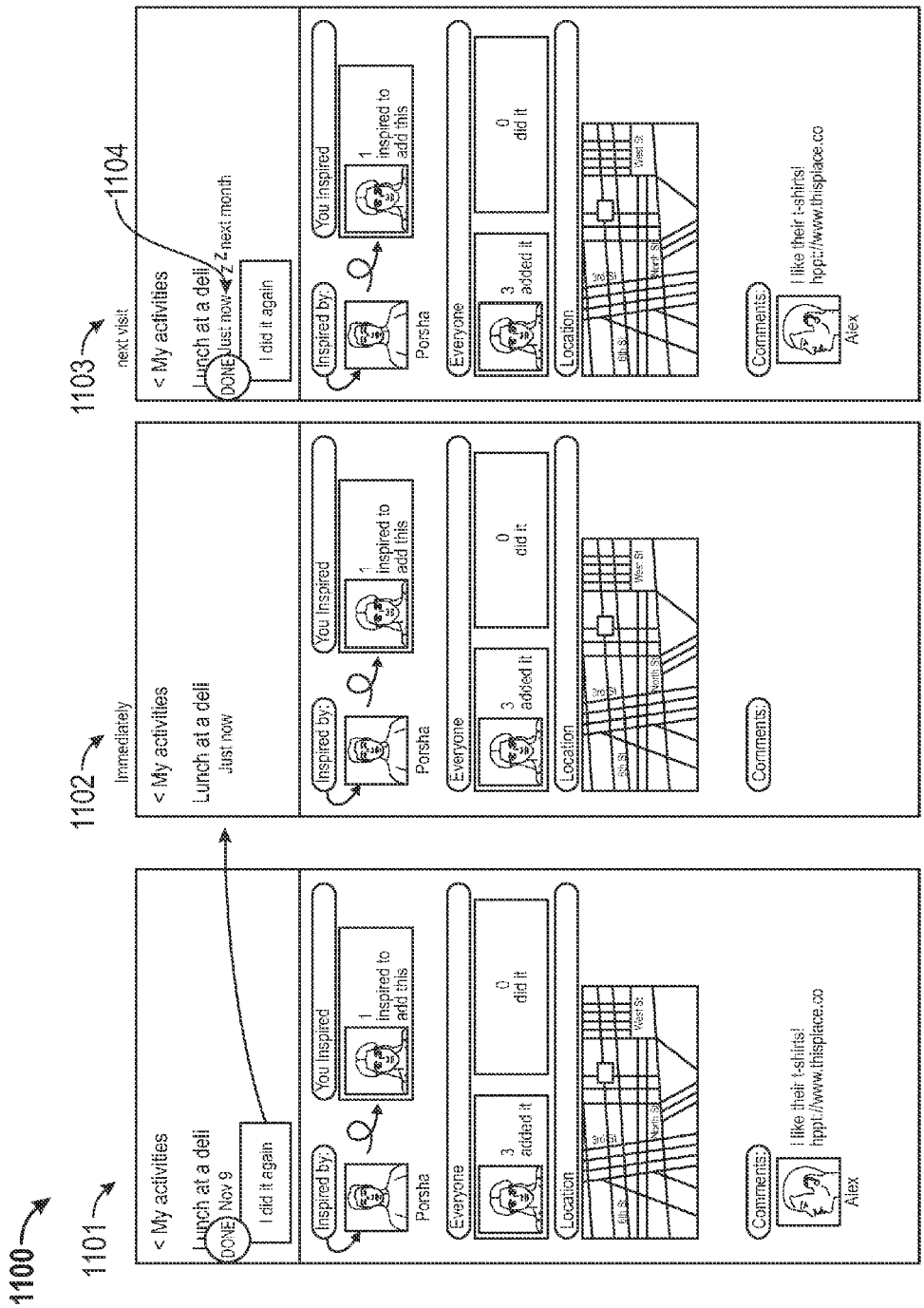

1100
1101
< My activities
Lunch at a deli
DONE Nov 9
I did it again
Inspired by:
Porsha
You Inspired
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments:
I like their t-shirts!
hppt://www.thisplace.co
Alex
1102
Immediately
< My activities
Lunch at a deli
Just now
Inspired by:
Porsha
You Inspired
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments:
1103
next visit
< My activities
Lunch at a deli
DONE Just now
next month
I did it again
Inspired by:
Porsha
You Inspired
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments:
I like their t-shirts!
hppt://www.thisplace.co
Alex
1104

FIG. 11

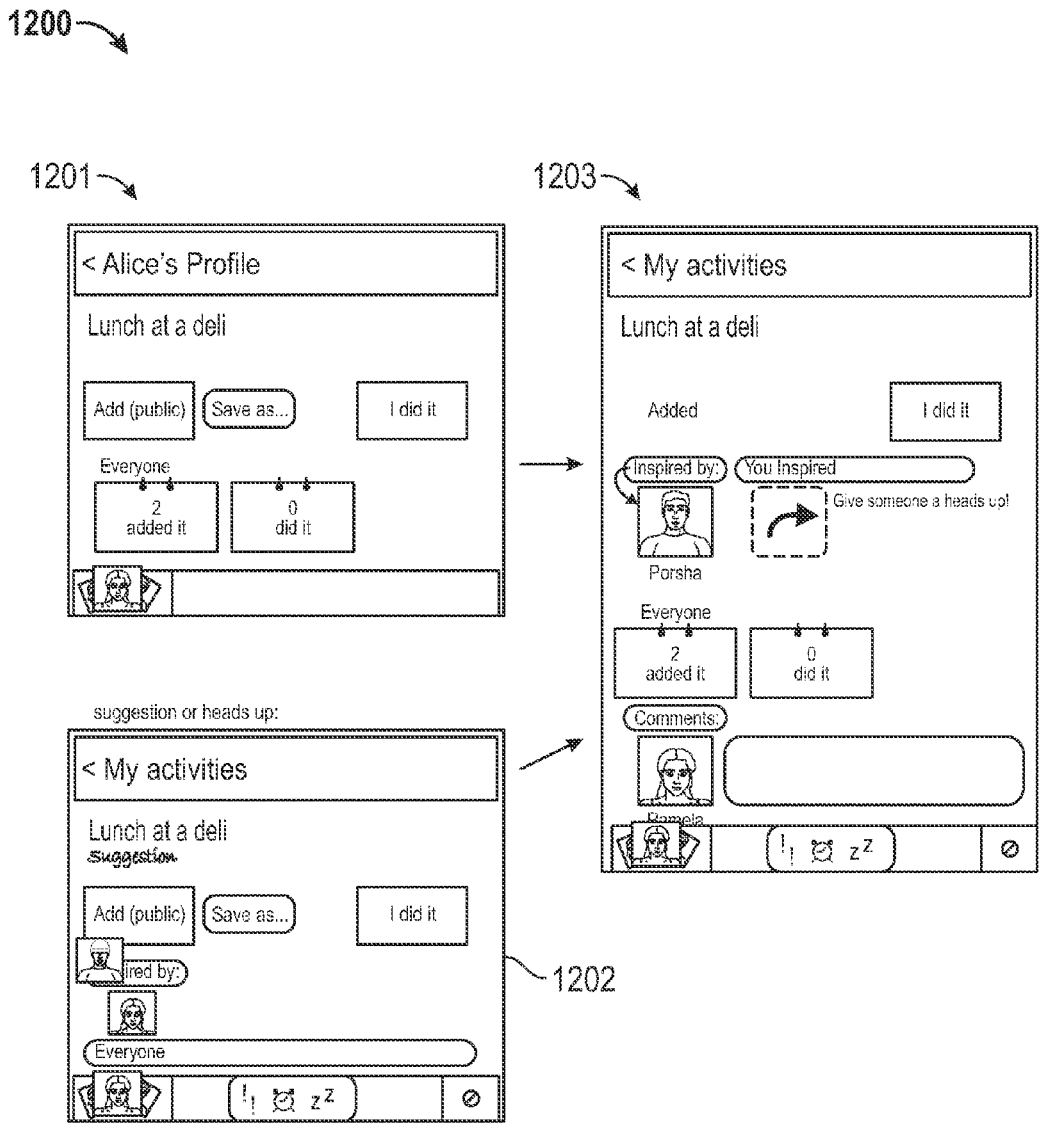

1200
1201
1203
< Alice's Profile
Lunch at a deli
Add (public)
Save as...
I did it
Everyone
2
added it
0
did it
< My activities
Lunch at a deli
Added
I did it
Inspired by:
You Inspired
Give someone a heads up!
Porsha
Everyone
2
added it
0
did it
Comments:
suggestion or heads up:
< My activities
Lunch at a deli
Suggestion
Add (public)
Save as...
I did it
Everyone
1202

FIG. 12

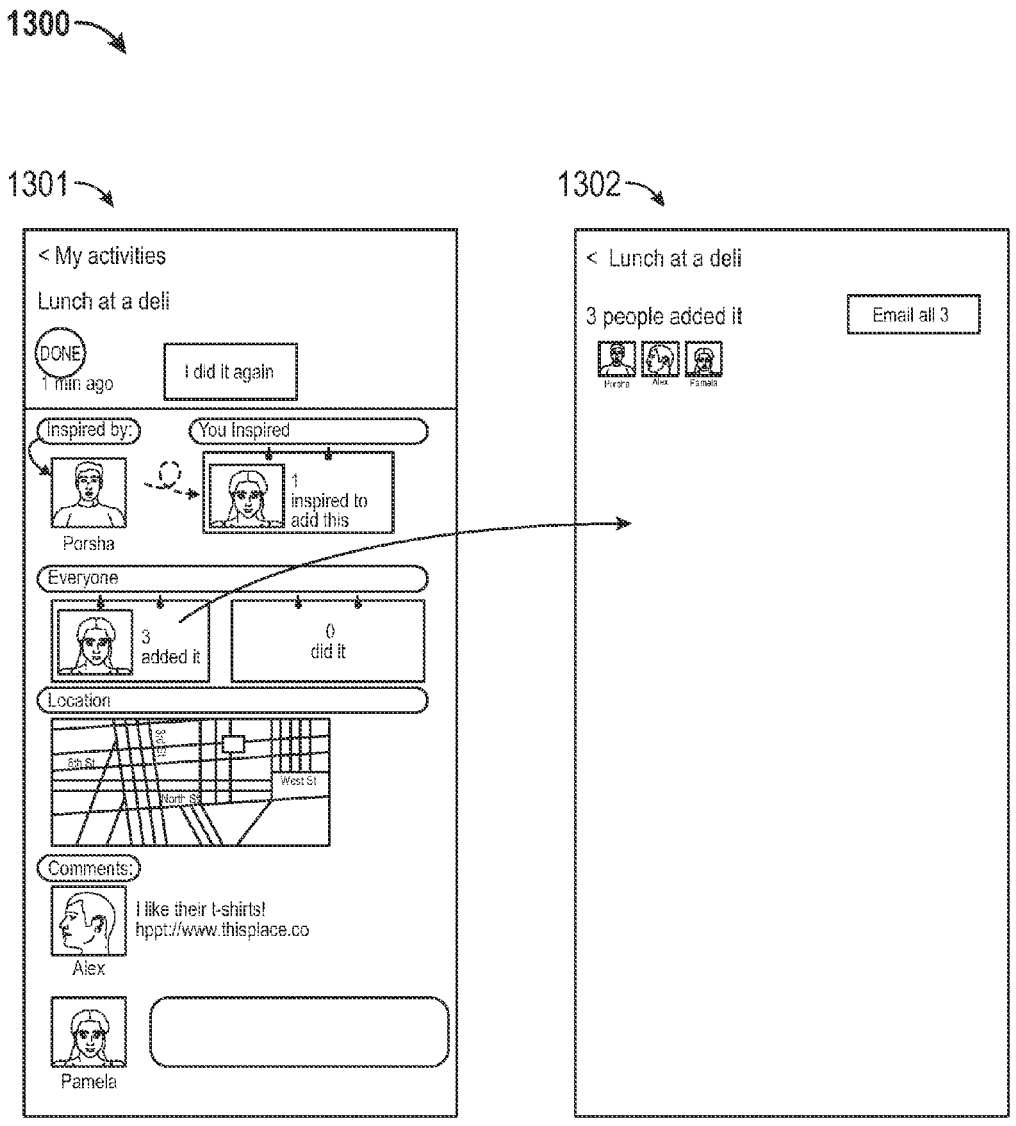

1300
1301
1302
< My activities
Lunch at a deli
DONE
1 min ago
I did it again
Inspired by:
You Inspired
Porsha
1
inspired to
add this
Everyone
3
added it
0
did it
Location
5th St
West St
North St
Comments:
I like their t-shirts!
hppt://www.thisplace.co
Alex
Pamela
< Lunch at a deli
3 people added it
Email all 3

FIG. 13

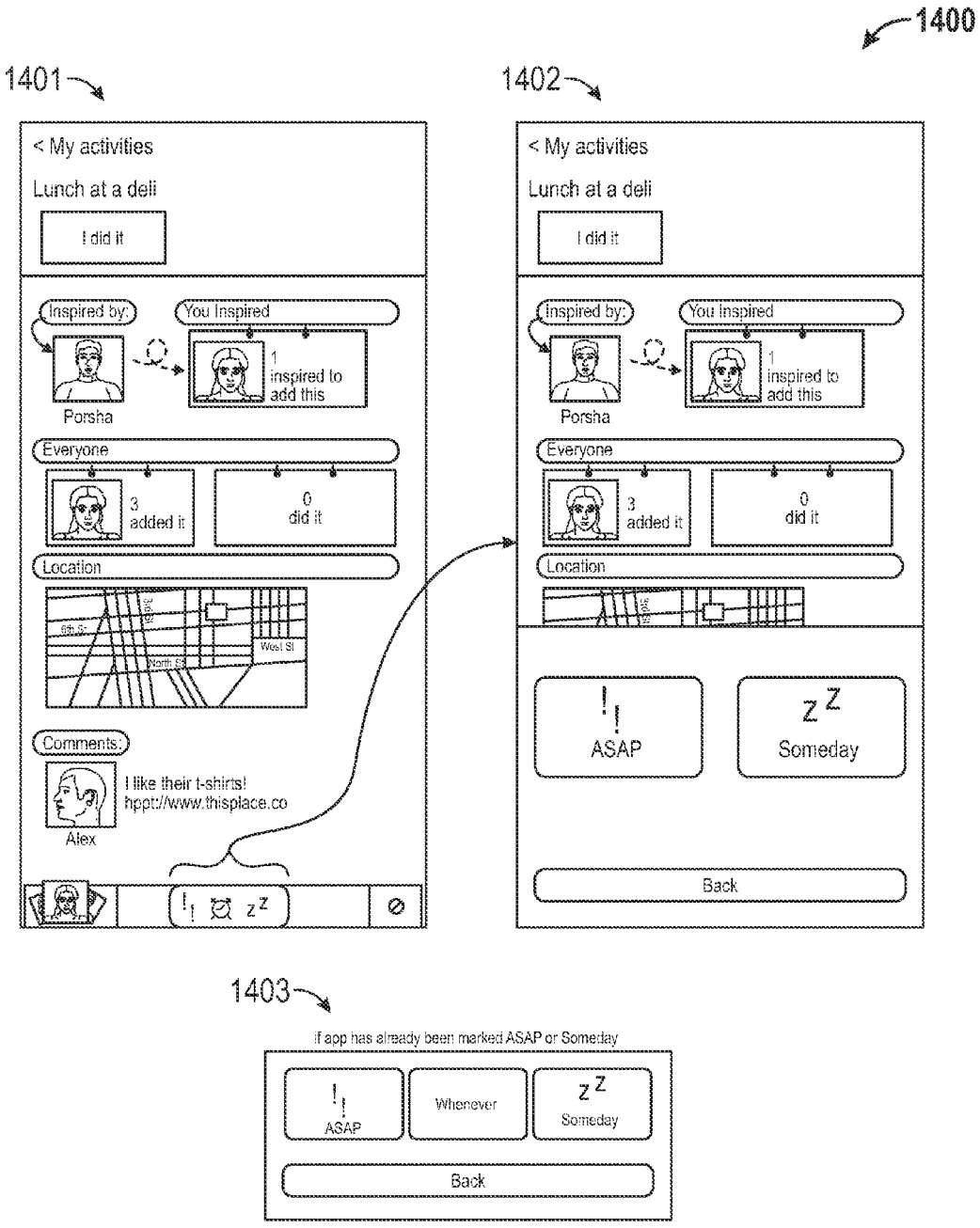

1400
1401
1402
< My activities
Lunch at a deli
I did it
Inspired by:
You Inspired
Porsha
1
inspired to
add this
Everyone
3
added it
0
did it
Location
Comments:
I like their t-shirts!
hppt://www.thisplace.co
Alex
ASAP
Someday
Back
1403
if app has already been marked ASAP or Someday
ASAP
Whenever
Someday
Back

FIG. 14

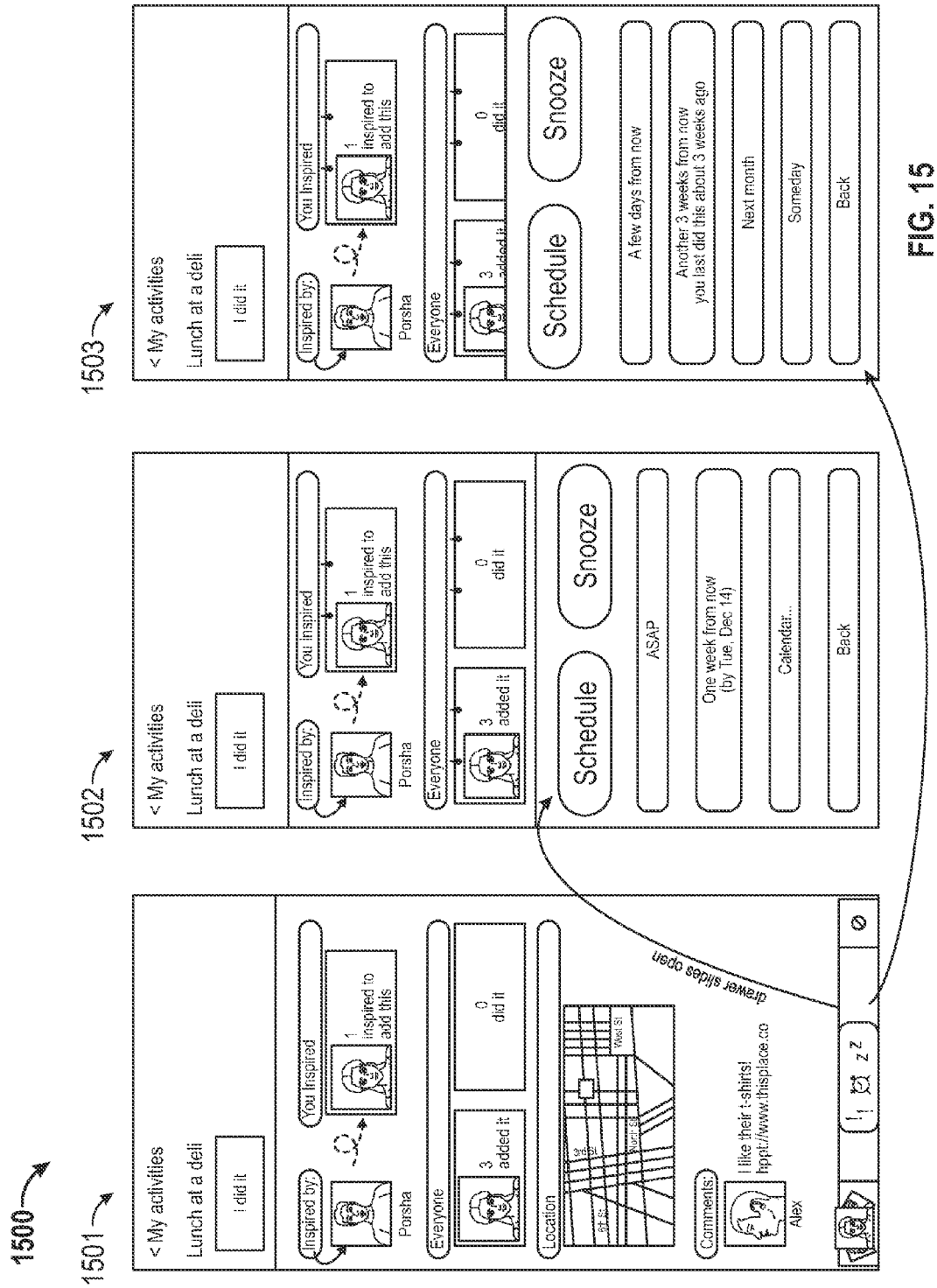

1500
1501
1502
1503
< My activities
Lunch at a deli
I did it
Inspired by:
Porsha
You inspired
1 inspired to add this
Everyone
3 added it
0 did it
Location
Comments
I like their t-shirts! hppt://www.thisplace.co
Alex
drawer slides open
Schedule
Snooze
ASAP
One week from now (by Tue, Dec 14)
Calendar...
Back
A few days from now
Another 3 weeks from now you last did this about 3 weeks ago
Next month
Someday

FIG. 15

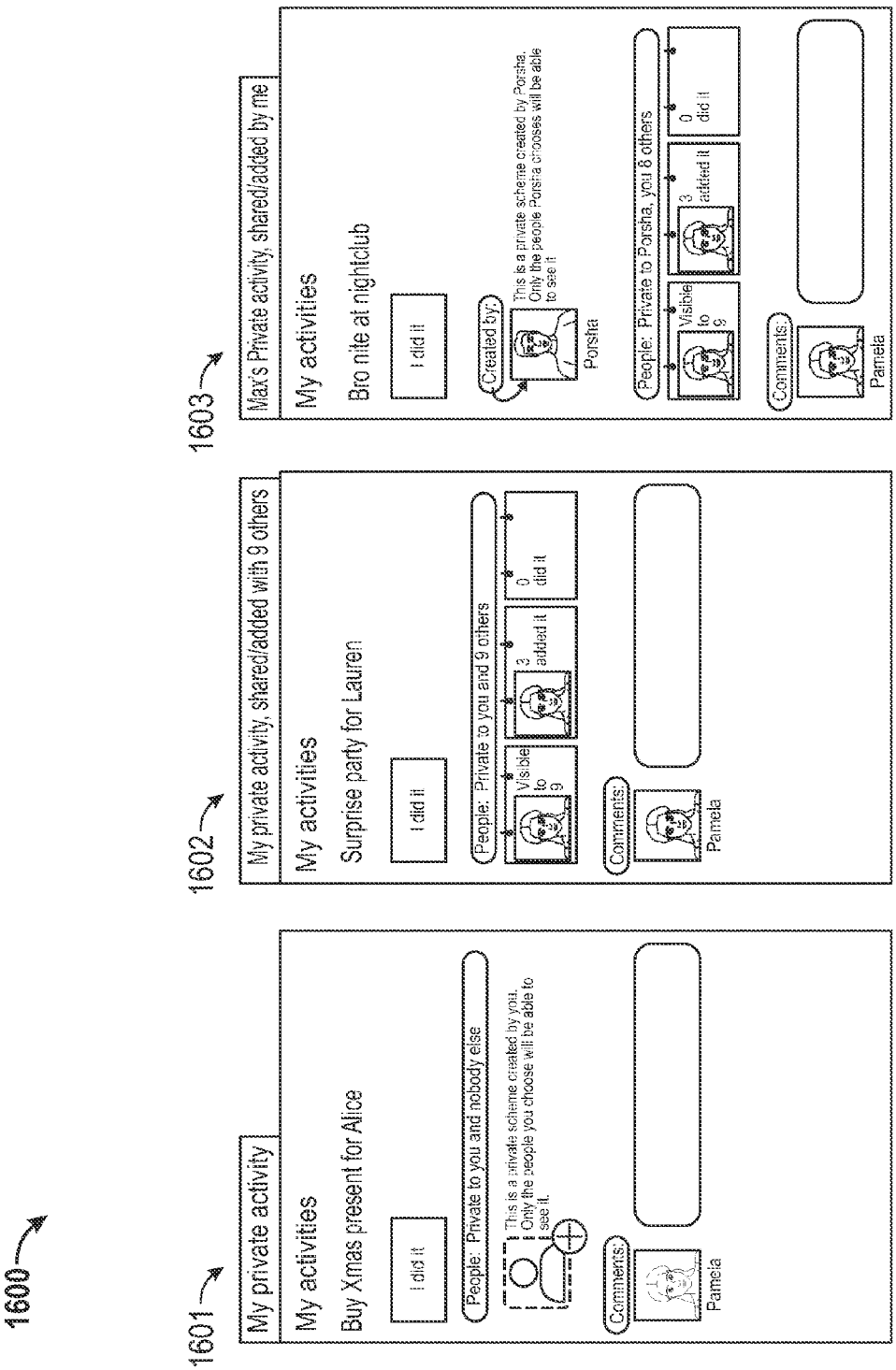

1600
1601
My private activity
My activities
Buy Xmas present for Alice
I did it
People: Private to you and nobody else
This is a private scheme created by you. Only the people you choose will be able to see it.
Comments:
Pamela
1602
My private activity, shared/added with 9 others
My activities
Surprise party for Lauren
I did it
People: Private to you and 9 others
Visible to 9
3 added it
0 did it
Comments:
Pamela
1603
Max's Private activity, shared/added by me
My activities
Bro nite at nightclub
I did it
Created by:
This is a private scheme created by Porsha. Only the people Porsha chooses will be able to see it
Porsha
People: Private to Porsha, you & others
Visible to 9
3 added it
0 did it
Comments:
Pamela

FIG. 16

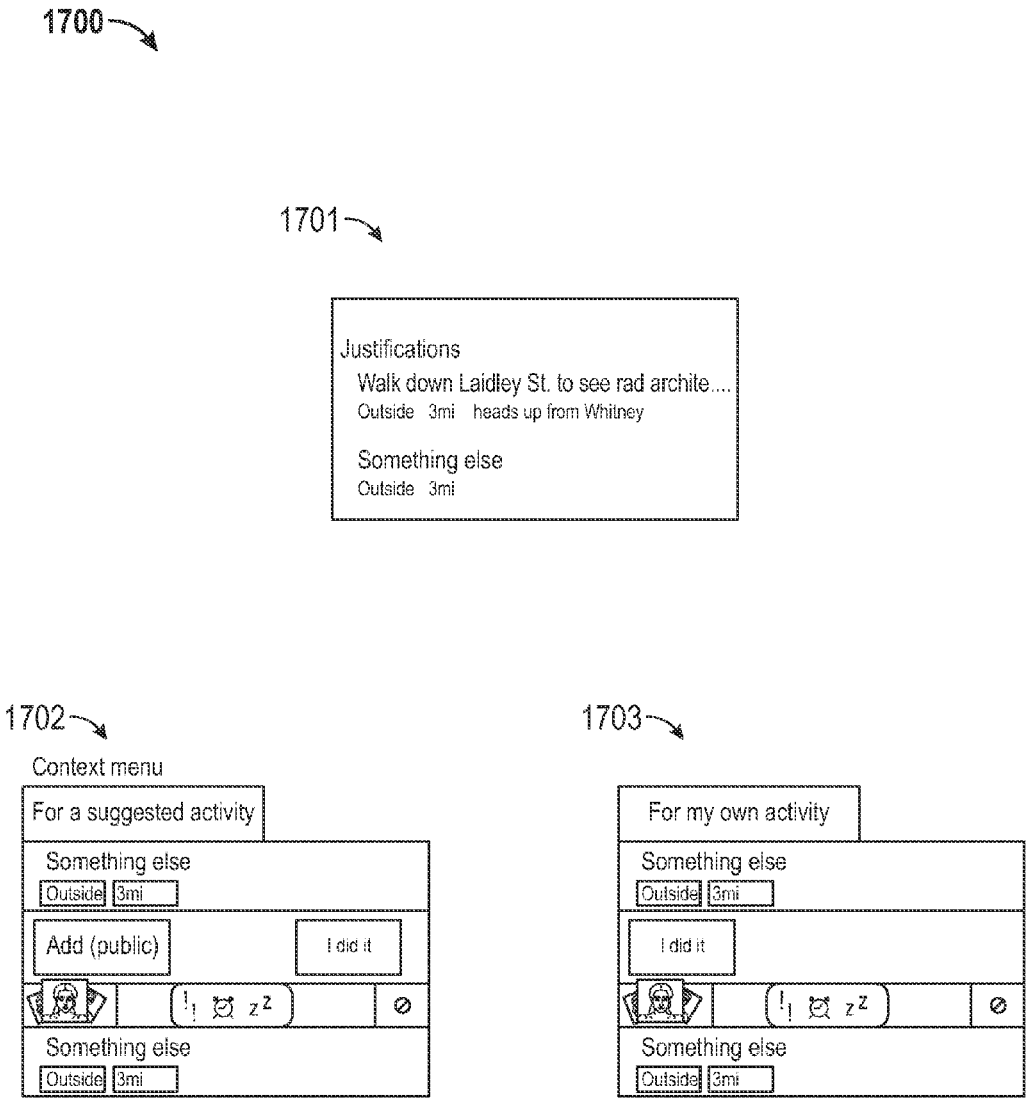

1700
1701
Justifications
Walk down Laidley St. to see rad archite....
Outside 3mi heads up from Whitney
Something else
Outside 3mi
1702
Context menu
For a suggested activity
Something else
Outside 3mi
Add (public)
I did it
Something else
Outside 3mi
1703
For my own activity
Something else
Outside 3mi
I did it
Something else
Outside 3mi

FIG. 17

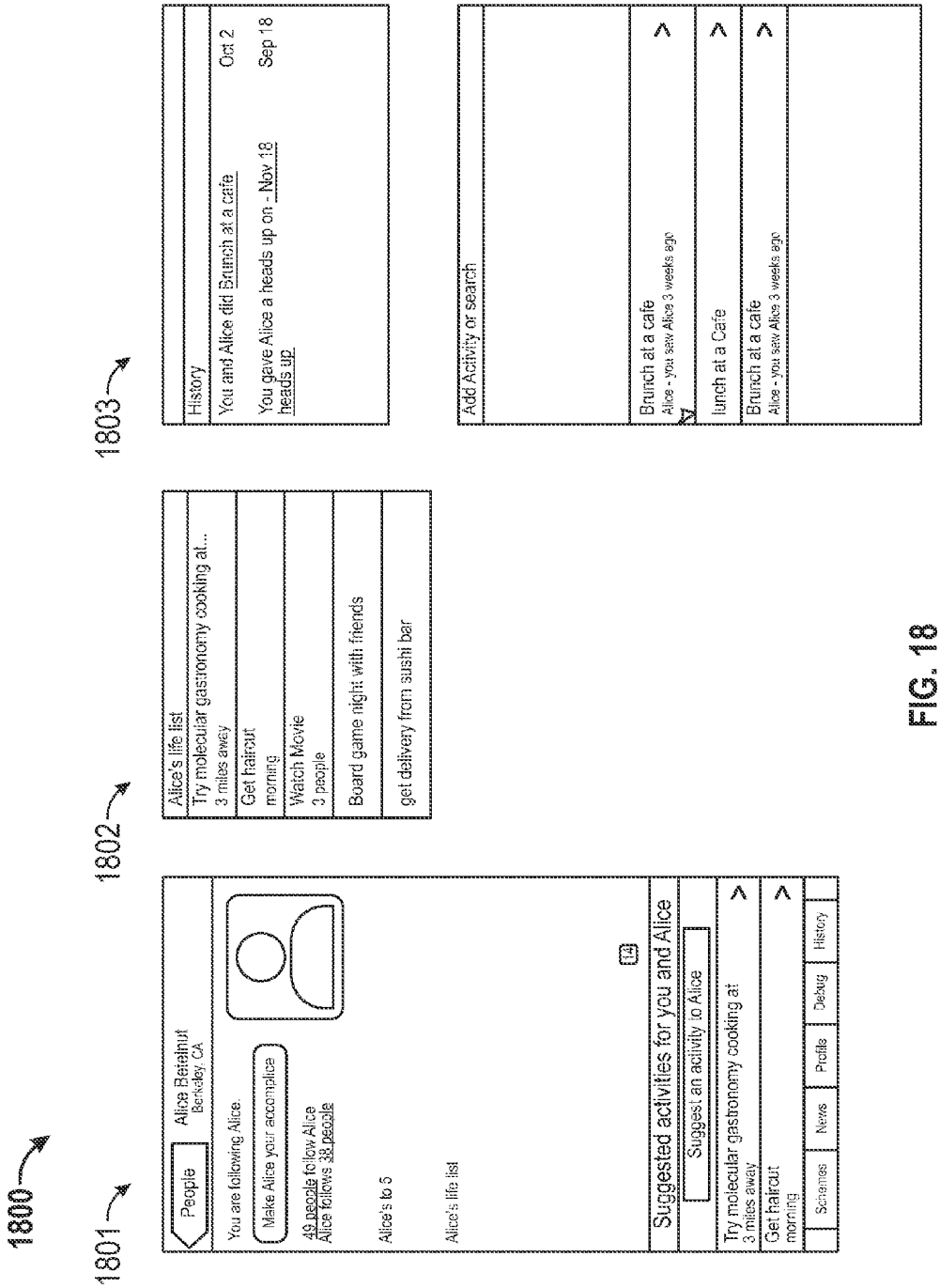

1800
1801
People
Alice Beisiinut
Berkeley CA
You are following Alice.
Make Alice your accomplice
49 people follow Alice
Alice follows 38 people
Alice's to 5
Alice's life list
Suggested activities for you and Alice
Suggest an activity to Alice
Try molecular gastronomy cooking at
3 miles away
Get haircut
morning
Scrames
News
Profile
Debug
History
1802
Alice's life list
Try molecular gastronomy cooking at...
3 miles away
Get haircut
morning
Watch Movie
3 people
Board game night with friends
get delivery from sushi bar
1803
History
You and Alice did Brunch at a cafe
Oct 2
You gave Alice a heads up on - Nov 18
Sep 18
heads up
Add Activity or search
Brunch at a cafe
Alice - you saw Alice 3 weeks ago
lunch at a Cafe
Brunch at a cafe
Alice - you saw Alice 3 weeks ago

FIG. 18

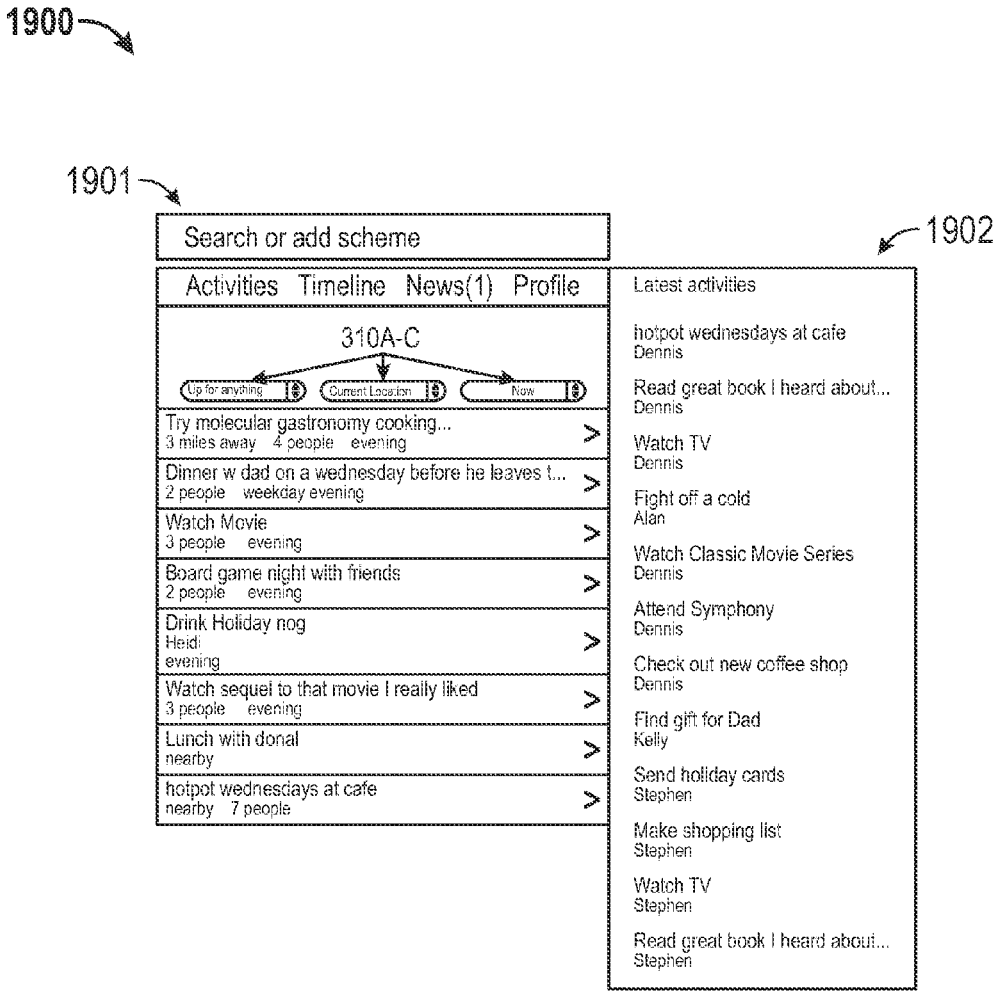

1900
1901
1902
Search or add scheme
Activities Timeline News(1) Profile
310A-C
Up for anything
Current Location
Now
Try molecular gastronomy cooking...
3 miles away 4 people evening
Dinner w dad on a wednesday before he leaves t...
2 people weekday evening
Watch Movie
3 people evening
Board game night with friends
2 people evening
Drink Holiday nog
Heidi
evening
Watch sequel to that movie I really liked
3 people evening
Lunch with donal
nearby
hotpot wednesdays at cafe
nearby 7 people
Latest activities
hotpot wednesdays at cafe
Dennis
Read great book I heard about...
Dennis
Watch TV
Dennis
Fight off a cold
Alan
Watch Classic Movie Series
Dennis
Attend Symphony
Dennis
Check out new coffee shop
Dennis
Find gift for Dad
Kelly
Send holiday cards
Stephen
Make shopping list
Stephen
Watch TV
Stephen
Read great book I heard about...
Stephen

FIG. 19

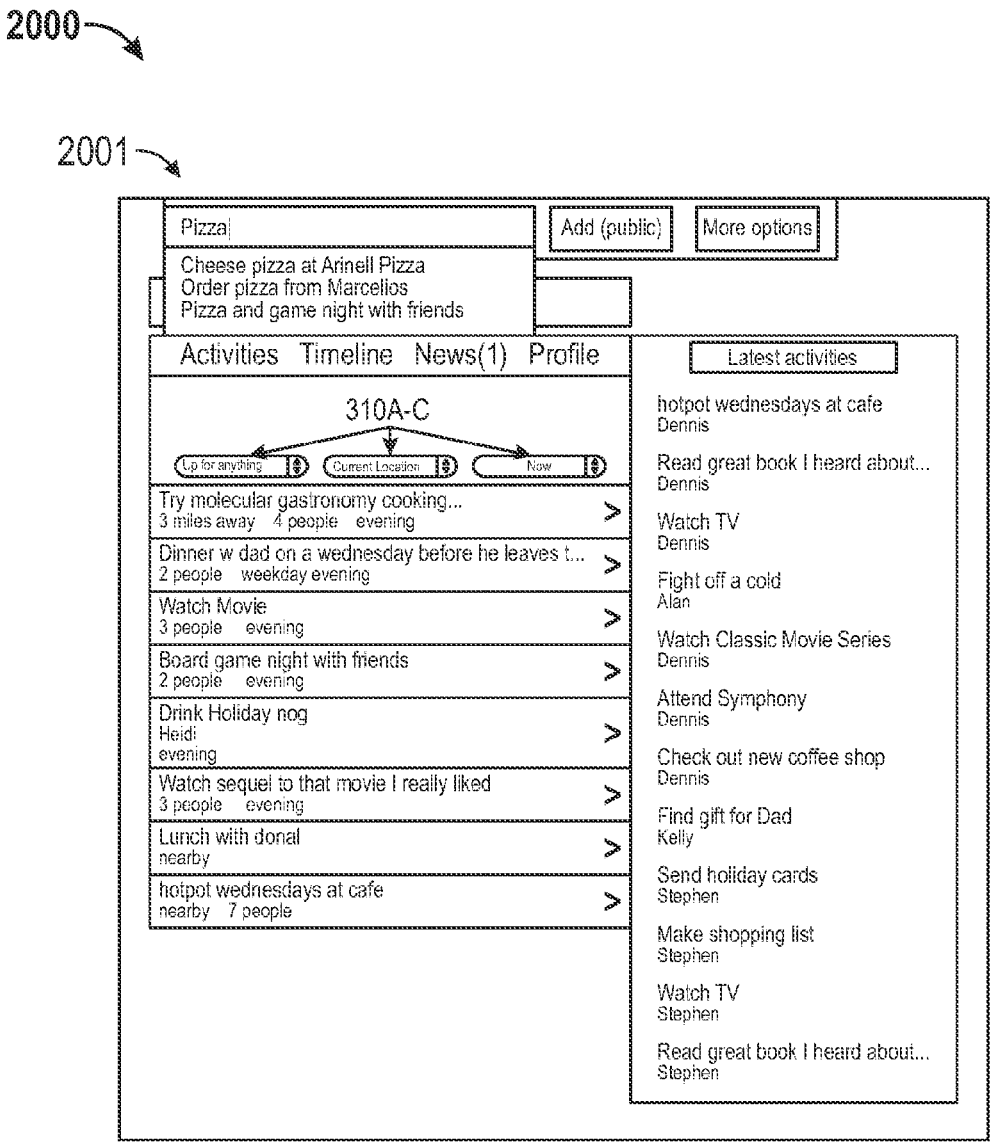

2000
2001
Pizza
Add (public)
More options
Cheese pizza at Arinell Pizza
Order pizza from Marcellos
Pizza and game night with friends
Activities Timeline News(1) Profile
Latest activities
310A-C
Up for anything
Current Location
Now
Try molecular gastronomy cooking...
3 miles away 4 people evening
Dinner w dad on a wednesday before he leaves t...
2 people weekday evening
Watch Movie
3 people evening
Board game night with friends
2 people evening
Drink Holiday nog
Heidi
evening
Watch sequel to that movie I really liked
3 people evening
Lunch with donal
nearby
hotpot wednesdays at cafe
nearby 7 people
hotpot wednesdays at cafe
Dennis
Read great book I heard about...
Dennis
Watch TV
Dennis
Fight off a cold
Alan
Watch Classic Movie Series
Dennis
Attend Symphony
Dennis
Check out new coffee shop
Dennis
Find gift for Dad
Kelly
Send holiday cards
Stephen
Make shopping list
Stephen
Watch TV
Stephen
Read great book I heard about...
Stephen

FIG. 20

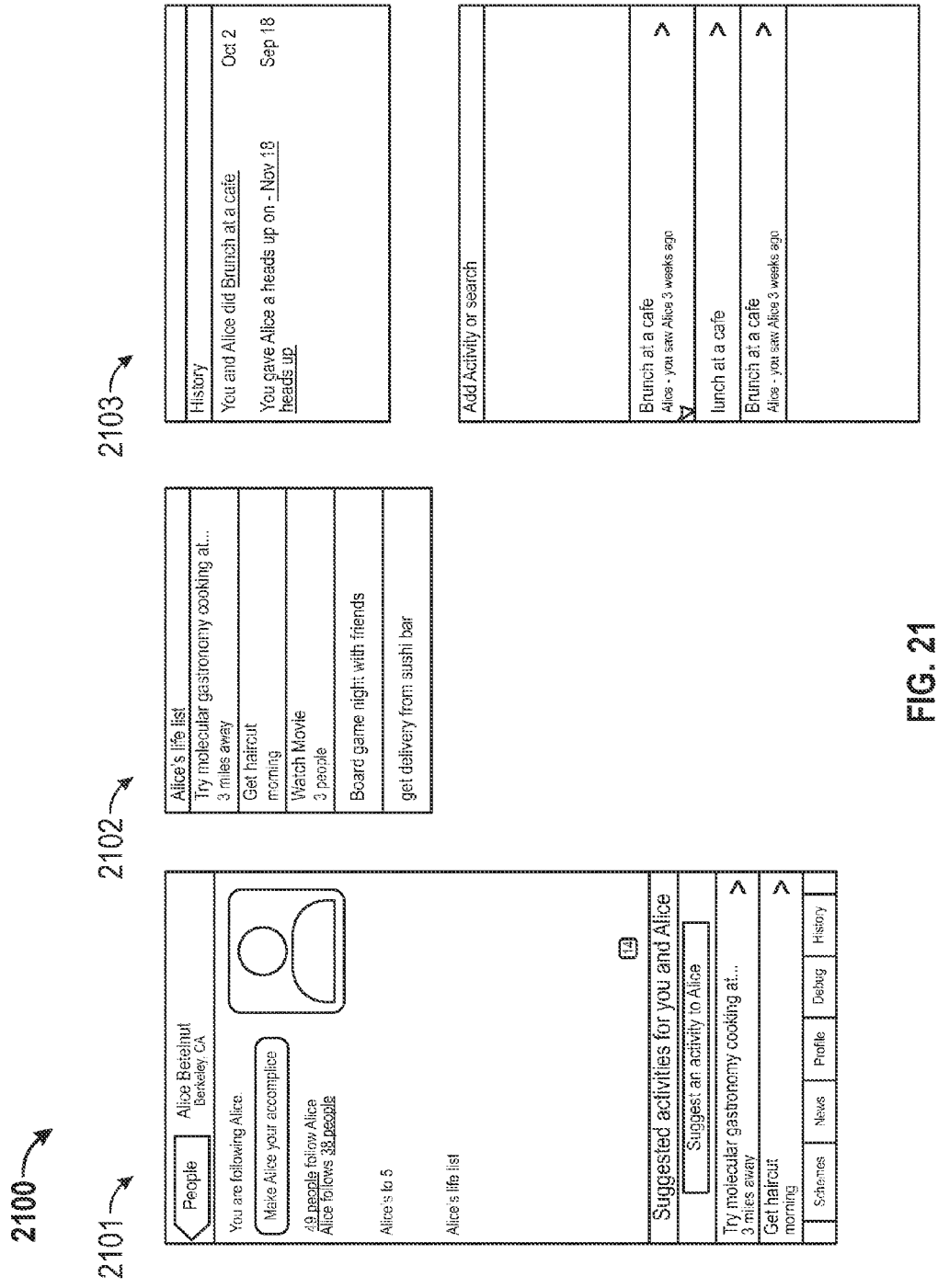

2100
2101
People
Alice Berejnut
Berkeley, CA
You are following Alice.
Make Alice your accomplice
49 people follow Alice
Alice follows 38 people
Alice's to 5
Alice's life list
14
Suggested activities for you and Alice
Suggest an activity to Alice
Try molecular gastronomy cooking at...
3 miles away
Get haircut
morning
Schemes
News
Profile
Debug
History
2102
Alice's life list
Try molecular gastronomy cooking at...
3 miles away
Get haircut
morning
Watch Movie
3 people
Board game night with friends
get delivery from sushi bar
2103
History
You and Alice did Brunch at a cafe
Oct 2
You gave Alice a heads up on - Nov 18
Sep 18
heads up
Add Activity or search
Brunch at a cafe
Alice - you saw Alice 3 weeks ago
lunch at a cafe
Brunch at a cafe
Alice - you saw Alice 3 weeks ago

FIG. 21

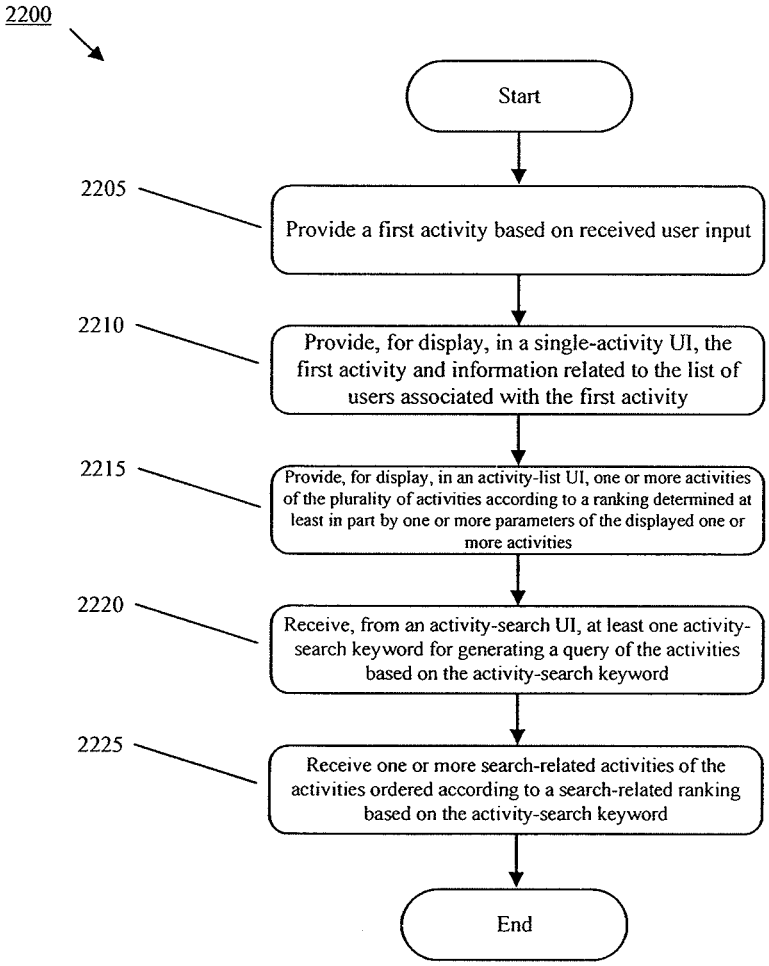

2200
Start
2205
Provide a first activity based on received user input
2210
Provide, for display, in a single-activity UI, the first activity and information related to the list of users associated with the first activity
2215
Provide, for display, in an activity-list UI, one or more activities of the plurality of activities according to a ranking determined at least in part by one or more parameters of the displayed one or more activities
2220
Receive, from an activity-search UI, at least one activity-search keyword for generating a query of the activities based on the activity-search keyword
2225
Receive one or more search-related activities of the activities ordered according to a search-related ranking based on the activity-search keyword
End

FIG. 22

USER INTERFACE FOR ACTIVITY STATUS AND HISTORY

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims the benefit of priority under 35 U.S.C. §119 from U.S. Provisional Patent Application Ser. No. 61/425,721 entitled "USER INTERFACE FOR ACTIVITY STATUS AND HISTORY," filed on Dec. 21, 2010, the disclosure of which is hereby incorporated by reference in its entirety for all purposes.

BACKGROUND

Unless otherwise indicated herein, the materials described in this section are not prior art to the claims in this application and are not admitted to be prior art by inclusion in this section.

Various technologies can be utilized to electronically exchange information between users. For example, computers, telephones, and personal digital assistants (PDAs) can be used to exchange content over communication networks including the Internet. The content exchanged between such devices can include web pages that, in turn, can include text, video data, audio data and/or other types of data.

SUMMARY

Disclosed herein are methods and systems that relate to an "activity assistant" that provides users with dynamically-selected "activities" that are intelligently tailored to the user's world. Accordingly, an example activity assistant may customize display of a user's activity list, suggest activities, and customize activity search results based on personalized factors such as the user's interests, current mood, and intent. Furthermore, an example activity assistant may also be capable of intelligently varying the behavior of a given activity from one user to another, depending upon the characteristics of a given user. For example, the activity assistant may score an activity based not only on the characteristics of the activity itself, but also based on data that is indicative of the user's "context" (e.g., the user's, interests, intents, moods, experiences, etc.).

According to an example embodiment, a user interface may also be provided that allows for intuitive user interaction with activities via the activity assistant. This user interface may be generally referred to herein as an "activity assistant user interface". A user typically accesses the activity assistant UI by logging in to a user's activity-assistant account. According to an example embodiment, the activity assistant UI displays graphical and textual representations of activities to a user in a logical manner that varies according to the interests, intents, and moods of the user. Via the activity assistant UI, the user may view activities they have added to a personal "activity list," view suggested activities, create and add new activities to their activity list, and/or add/delete existing activities (i.e. those created by other users) to/from their activity list, among other functions.

Configurations of the subject technology provide a user interface as disclosed herein. The user interface in some configurations includes: (a) an activity-creation display configured to create a first activity of a plurality of activities, each activity of the plurality of activities comprising a plurality of parameters, the plurality of parameters includes a status parameter, and a list of associated users, and to display the first activity; (b) a single-activity display configured to display a single activity of the plurality of activities, and information related to the list of users associated with the activity, wherein the information related to the list of users comprises inspiration information for the activity and information for each user on the list of users, the information for each user comprising a user identifier, the single-activity display comprising: (1) a parameter-entry display configured to select a parameter of the plurality of parameters for the single activity and to send a signal to the single activity corresponding to the selected parameter; (2) a heads-up display configured to send a heads-up message about the single activity to a user; (3) a location display configured to display information related to a location of the single activity; (4) a status indicator configured to display a status based on the status parameter of the single activity; and (5) a status-entry display configured to, upon selection, send a signal to change the status indicator of the single activity; (c) an activity-list display configured to display one or more activities of the plurality of activities according to a ranking, the ranking determined at least in part by one or more parameters of the displayed one or more activities, the activity-list display comprising: (1) a timeline display configured to generate a time-based display of the one or more activities, wherein the ranking for the timeline display is based at least in part on the status parameters of the one or more activities and/or the time-related parameters of the one or more activities; and (2) a life-list display configured to generate an importance based display of the one or more activities, wherein the ranking for the life-list display is based at least in part on information stored in a profile for a user, wherein the profile for the user comprises at least a mood parameter, a location parameter, and a time-related parameter; and (d) an activity-search display configured to receive at least one activity-search keyword, to generate a query of the plurality of activities based on the activity-search keyword, and to retrieve one or more search-related activities of the plurality of activities ordered according to a search-related ranking based on the activity-search keyword, wherein the activity-list display is further configured to display the one or more search-related activities.

BRIEF DESCRIPTION OF THE FIGURES

FIG. **1** depicts a network in accordance with an example embodiment.

FIG. **2**A is a block diagram of a computing device in accordance with an example embodiment.

FIG. **2**B depicts a network with computing clusters in accordance with an example embodiment.

FIG. **3**A is a block diagram illustrating features of a user interface, according to an example embodiment.

FIG. **3**B is another block diagram illustrating features of a user interface, according to an example embodiment.

FIG. **4** depicts one embodiment of a user creating a new activity.

FIG. **5** depicts a user entering a user-specific parameter, such as lazy, into the activity-assistant user interface.

FIG. **6** depicts a timeline of activities based on parameters set by a user. For example, some activities have been discarded, while others have been recently done.

FIG. **7** depicts a timeline of activities based on parameters set by a user.

FIG. **8** depicts the addition of additional users to a specific activity.

FIG. **9** depicts the addition of additional users to a specific activity, where the user adding additional users was "inspired" by a first user.

FIG. **10** depicts an example activity-assistant user interface for an activity that has been marked "done."

FIG. **11** depicts an example activity-assistant user interface for an activity that has been marked "done."

FIG. **12** depicts an activity viewed by a current user, perhaps that a first user has suggested to the current user or perhaps otherwise found by the current user (e.g., via search or self-generation).

FIG. **13** depicts an activity that many users have added.

FIG. **14** depicts a user changing the priority of an activity by either delaying the activity or marking is ASAP.

FIG. **15** depicts a further embodiment of a user changing the priority of an activity by either delaying the activity or reminding the user to complete the activity.

FIG. **16** depicts "private" activities.

FIG. **17** depicts menus generated by the activity-assistant user interface for a suggested activity.

FIG. **18** depicts a user's profile within the activity-assistant user interface.

FIG. **19** depicts an example activity-assistant user interface.

FIG. **20** depicts an example activity-assistant user interface.

FIG. **21** depicts an example user interface of a user profile for a user with a self-curated list of activities that tell users about the user.

FIG. **22** conceptually illustrates an example process for performing different operations in connection with the aforementioned user interfaces.

DETAILED DESCRIPTION

The following detailed description describes various features and functions of the example systems, devices, and methods with reference to the accompanying figures. It should be understood that the word "example" is used herein to mean "serving as an example, instance, or illustration." Any embodiment described herein as "example" is not necessarily to be construed as preferred or advantageous over other embodiments. In the figures, similar symbols typically identify similar components, unless context dictates otherwise. The illustrative embodiments described in the detailed description, figures, and claims are not meant to be limiting. Other embodiments can be utilized, and other changes can be made, without departing from the spirit or scope of the subject matter presented herein. It will be readily understood that the aspects of the present disclosure, as generally described herein, and illustrated in the figures, can be arranged, substituted, combined, separated, and designed in a wide variety of different configurations, all of which are explicitly contemplated herein.

Overview

An "activity," as used herein, can be a data construct describing a thing to do, which a user can associate with a user's "activity-assistant account." In an example embodiment, an activity is defined at least in part by one or more singular, global activity parameters. For example, global parameters for a given activity may include: (a) a title or text description (e.g., "get brunch at Boogaloo's restaurant"), (b) data indicating the location that is associated with the activity (e.g., a latitude/longitude and/or a street address of Boogaloo's restaurant), (c) data indicating one or more user "moods" that may be indicative of the activity being more or less well-suited for a given user at a given point in time (e.g., "fun", "social", "cerebral", "productive", "ambitious", etc.), (d) data indicating time constraints on the activity (e.g., the hours that Boogaloo's restaurant is open and/or the hours during which Boogaloo's restaurant serves brunch), and/or (e) any other data that may be directly or indirectly interpreted to affect the importance of a given activity to a given user.

Generally, an activity is a user-defined construct, and thus the global parameters that define each activity may vary. In particular, a given activity may include all of the above-mentioned global activity parameters, a subset of the above-mentioned parameters, or none of the above-mentioned parameters. For example, a user may create an activity that is not tied to any particular location (e.g., "do homework for math class"), and thus choose not to provide a location. Furthermore, as activities are flexible and dynamic constructs, it should be understood that the above-mentioned examples of global parameters are not limiting. It is also possible that an activity may be generated by a computing system without any initial user input (or alternatively, generated based on some user-provided input).

Once an activity is created, its global parameters may be applied to all users who add the activity or become associated with the activity. Thus, in effect, there is a single copy of each activity and its global parameters that is common to all those users. It should be understood, however, that global parameters can still be flexible and dynamic, and may change over time in relation to the activity. For example, a "popularity" parameter may be defined for an activity that is updated on an ongoing basis to reflect the number of users that have added the activity.

To further allow for customization of activities to a particular user, "user-specific" parameters, which vary between users, may be defined for an activity. Accordingly, while the global parameters of an activity are the same for all users, each user that adds an activity may customize their user-specific parameters for the activity. For instance, user-specific parameters may be used to specify: (a) plans regarding the activity (e.g., "I want to do it", "I want to do it again, but not for a few weeks," "I must do it before December 25," "I never want to do it again," etc.), (b) the user's history regarding that activity (e.g., I went there with Lauren on November 4 and again with Ryan on November 28), (c) personal time constraints based on user preferences (e.g., preference of brunch early on Sunday so that time is available to digest before yoga class at noon), and/or (d) any other personal preferences that may overrides or modify the global parameters (e.g., "I like to go to Boogaloo's restaurant when I'm sad because it cheers me up," "I like to go to Boogaloo's restaurant when I have friends in town," etc.).

In a further aspect, an activity may be designated as a "public" or "private" activity. Depending on how a given activity is defined, this designation may be made by setting a global parameter when the activity is created (and thus apply to all users who add the activity), and/or may be made via a user-specific parameter that is settable by each user who adds an activity.

An activity that is designated as "public" via a global parameter may be viewable (and thus addable) to all users, whereas an activity that is designated as "private" via a global parameter may only be viewable to the creator of the activity. In an example embodiment, a global parameter may be set to designate an activity as a "private shared" activity, in which case the activity may only be viewable by the author and the users the author specifies. Further, the fact that a given activity is designated as "public," "private," or "private shared" via a global parameter may be interpreted as a signal relevant to the importance of the activity to a certain user.

When an activity is designated as "private" via a user-specific parameter, other users are generally not notified that the user has added the activity. And when an activity is designated as "public" via a user-specific parameter, other users

may be notified and/or be able to see that the user has added the activity. Further, when an activity is designated as "public" via a user-specific parameter, the user may be able to define which other users can view and/or which other users should be notified that they have added the activity.

In an example embodiment, an "activity assistant" is provided, which is configured to evaluate the relative importance of activities to a particular user so that activities can be presented on the activity assistant user interface in a logical manner. In particular, the activity assistant may score an activity based not only on the characteristics of the activity itself, but also based on data that is indicative of the user's "context" (e.g., the user's, interests, intents, moods, experiences, associations with other users, etc.). With the support of the activity assistant, the activity assistant user interface may therefore provide users with a dynamic and flexible mechanism for deciding what activities they might enjoy, and how they would like to spend their time. As used herein, the phrase "user interface" refers to a graphical user interface (GUI) that can include different sets of graphical elements. A graphical element can include, but is not limited to, a button, check box, radio button, slider, list box, drop-down list, menu, combo box, icon, text box, scroll bar, etc.

In order to quantify the importance of a particular activity for a particular user, the activity assistant may identify and/or determine any number of "signals" that may be directly or indirectly relevant to the importance of an activity to the particular user. From the perspective of the activity assistant, signals may take the form of information provided by global parameters and user-specific parameters taken individually or information determined by evaluating interactions between global parameters, user-specific parameters, and/or other data sources. The activity assistant may evaluate the signals for a particular combination of user and activity, and based on the signals, quantify the importance of the particular activity for the particular user (e.g., by assigning a "score" to the activity).

To provide some examples of such signals, they may include but are not limited to: (a) the level of similarity between user's mood and activity mood, (b) the level of similarity between the user's context (as indicated by user-specific signals and/or user-specific parameters indicating, for example, whether the user is on a desktop computer/mobile phone, on-line/off-line, talking on the phone, driving, walking, etc.) and corresponding activity context requirements and/or restrictions (as indicated by global parameters of the activity), (c) a distance between the user's current detected (or indicated) location and the activity location (if available), (d) the appropriateness of the activity for the current weather conditions at the user's current or indicated location and/or the current weather conditions at the activity's indicated location (e.g., rainy, sunny, snowy, etc.), (e) a user-designated priority for the activity, (f) a user-designated due date (or next due date, if recurring), (f) a user's snooze history or pattern for the activity, (g) an amount of time required for the activity, (h) a progress or status of the activity (e.g., done/completed, active, in-progress, etc.), (i) ownership of the activity (e.g., whether the owner is the particular user in question or another user), (j) whether the user received an invitation to the activity or just a notice that the activity exists (e.g., a "heads-up"), (k) a popularity of the activity (e.g., number of comments on an activity, or the number of people who have commented, copied, liked, shared, done/completed, or followed the activity), (l) a similarity between a user query string and the activity text (for search/suggest), (m) a similarity between a user query string and the names or e-mails of other users associated with the activity (for search/suggest), (n) a similarity between user query string and activity comment text (for search/suggest), and (o) whether the user indicated another user with whom to participate in the activity with. Other possibilities exist as well.

Supported with this intelligence from the activity assistant, the activity assistant user interface may present activities that a particular user has associated with their account in a logical order that is based at least in part upon the relative importance of the activities to the user. In particular, the activity assistant may evaluate the signals for each activity in a user's activity list (e.g., each activity that has been added by the user) and assign a score to the activity. The activity assistant can then rank the activities in the user's activity list according to their respectively determined score, and relay this information to the activity assistant user interface so that it can adjust the displayed activity list accordingly.

Further, the intelligence of the activity assistant may be utilized to provide "suggested" activities that are tailored to the particular user's preferences, tendencies, location, time table, associated other users, and/or mood at a given point in time. In particular, the activity assistant may initiate an activity search that takes into account the scores of activities when ranking the search results, and these search results may be presented to the user via the activity assistant user interface. In a similar manner, the activity assistant may support an "activity search" feature of the activity assistant user interface. This feature may allow the user to enter text and initiate an activity search on the text, the results of which factor in the relative scores of activities as assessed by the activity assistant.

According to an example embodiment, a user interface is provided that allows for intuitive user interaction with such activities. This user interface may be generally referred to herein as an "activity assistant user interface". A user typically accesses the activity assistant user interface by logging in to a user's activity-assistant account. According to an example embodiment, the activity assistant user interface displays graphical representations of activities to a user in a logical manner that varies according to the interests, intents, associations with other users, and moods of the user. Via the activity assistant user interface, the user may view activities they have added to a personal "activity list," view suggested activities, create and add new activities to their activity list, and/or add/delete existing activities (e.g., those created by other users) to/from their activity list, among other functions.

In some embodiments, the activity assistant user interface may help a user to visualize (a) how the user has been spending his or her time; and (b) how the user could be spending his or hers time in the future.

In some embodiments, a user may mark activities "I did it" one or more times and tag activities with a date window in which the activities can be done or must be done using the activity assistant user interface. In the context of the activity assistant described herein, the term "done" (and other grammatical form variations of "done") refers to a status of a corresponding activity (or activities) that has been completed by one or more users.

In some embodiments, the activity assistant may create a timeline view of what the user has done recently using the activity assistant user interface. Furthermore, the activity assistant user interface may classify activities done using stock categories ("productive", "fun") or more user specific/custom categories ("stuff with kids", "homeowner stuff", "Christmas shopping"), and show the breakdown of things done by category. For a given time window in the future, the

activity assistant user interface may show things that "must be done" in that time window and other things that "could be done" in that time window.

In some embodiments, the activity assistant user interface may allow for input of user-provided static signals related to state of activity. In other embodiments, the activity assistant may update both the "TO DO" list and history based on the static signals, and then update display in the activity assistant user interface.

In other embodiments, the activity assistant user interface may allow for input of activity type (i.e., stock category) and may further use the type of activity to update display base "TO DO" list and history, and display the list and the history using the activity assistant user interface.

Example Network Architecture of Activity Assistant

Turning to the figures, FIG. **1** depicts a network in accordance with an example embodiment. In network **100**, activity assistant server **108** and possibly activity content server **102** are configured to communicate, via a network **106**, with client devices **104***a*, **104***b*, and **104***c*. As shown in FIG. **1**, client devices can include a personal computer **104***a*, a telephone **104***b*, and a smart-phone **104***c*. More generally, the client devices **104***a*, **104***b*, and **104***c* (or any additional client devices) can be any sort of computing device, such as an ordinary laptop computer, desktop computer, network terminal, wireless communication device (e.g., a cell phone or smart phone), and so on.

The network **106** can correspond to a local area network, a wide area network, a corporate intranet, the public Internet, combinations thereof, or any other type of network(s) configured to provide communication between networked computing devices. Activity content server **102** can provide content to client device **104***a*-**104***c* and/or activity assistant server **108**. The content can include, but is not limited to, web pages, hypertext, scripts, binary data such as compiled software, images, audio, and/or video. The content can include compressed and/or uncompressed content and/or encrypted and/or unencrypted content. Other types of content are possible as well.

In an alternative arrangement, activity assistant server **108** and activity content server **102** can be co-located and/or combined as a common server. Further, it also possible that activity assistant server **108** and/or activity content server **102** can be accessible via a network separate from the network **106**. Yet further, although FIG. **1** only shows three client devices, activity assistant server **108** and/or activity content server **102** can serve any number of client devices (from a single client device to hundreds, thousands, or even more client devices).

Global activity database **112** typically includes activity data that defines a plurality of activities. In particular, the activity data for each activity may include one or more global activity parameters that collectively define the global context for the activity. Further, user-account database **110** may include per-account data for users' activity accounts. This per-account data may include, for a given one of the accounts, data indicating user-specific parameters and signals. Further, for a given activity account, the per-account data may include an indication of which activities, if any, are associated with the account (e.g., the activities that a user has added to their activity list).

According to an example embodiment, activity assistant server **108** embodies the "activity assistant" and thus is configured to provide the activity-assistant functionality described herein. In particular, activity assistant server **108** may be configured to identify signals relating to the importance of a particular activity to a particular user (e.g., relating to a given user-activity pair), so that activities can be logically displayed to a user, suggested to a user, and/or searched for a user via an activity assistant user interface.

In some embodiments, activity-assistant functionality described herein may also be performed by software on the device such as, but not limited to, devices **104***a*, **104***b*, and **104***c* as shown in FIG. **1**. For example, the client software running on the device such as, but not limited to, devices **104***a*, **104***b*, and **104***c* as shown in FIG. **1** may perform all or some portion of the ranking functionality and/or provide more advanced assistance, e.g. by providing a latitude/longitude and/or map for an address entered by the user via an activity assistant user interface and/or by directly communicating with a activity assistant processing system.

The activity assistant server **108** may acquire the data from which signals are determined, and/or data directly providing signals, from a number of different data sources. For example, activity content server **102** may provide activity assistant server **108** with access to global activity database **112** and user-account database **110**. Thus, when evaluating the importance of a particular activity to a particular user, activity assistant server **108** may retrieve the global parameters of the activity from global activity database **112**, as well as user-specific parameters from user-account database **110**.

FIG. **2**A is a block diagram of a computing device **200** in accordance with an example embodiment. Computing device **200** can be configured to perform one or more functions of activity content server **102**, client devices **104***a*, **104***b*, and **104***c*, activity assistant server **108**, user account datastore **110**, and/or universal activity datastore **112**. The computing device **200** can include a user interface module **201**, a network-communication interface module **202**, one or more processors **203**, and data storage **204**, all of which can be linked together via a system bus, network, or other connection mechanism **205**.

The user interface module **201** can be operable to send data to and/or receive data from external user input/output devices. For example, the user interface module **201** can be configured to send/receive data to/from user input devices such as a keyboard, a keypad, a touch screen, a computer mouse, a track ball, a joystick, a microphone, and/or other similar devices, now known or later developed. The user interface module **201** can also be configured to provide output to user display devices, such as one or more cathode ray tubes (CRT), liquid crystal displays (LCD), light emitting diodes (LEDs), displays using digital light processing (DLP) technology, printers, light bulbs, and/or other similar devices, now known or later developed. The user interface module **201** can also be configured to receive audible input(s) via the microphone (or similar audio input device) and/or generate audible output(s), such as a speaker, speaker jack, audio output port, audio output device, earphones, and/or other similar devices, now known or later developed.

The network-communications interface module **202** can include one or more wireless interfaces **207** and/or wireline interfaces **208** that are configurable to communicate via a network, such as the network **106** shown in FIG. **1**. The wireless interfaces **207** can include one or more wireless transceivers, such as a Bluetooth transceiver, a Wi-Fi transceiver perhaps operating in accordance with an IEEE 802.11 standard (e.g., 802.11a, 802.11b, or 802.11g), a WiMAX transceiver perhaps operating in accordance with an IEEE 802.16 standard, and/or other types of wireless transceivers configurable to communicate via a wireless network. The wireline interfaces **208** can include one or more wireline transceivers, such as an Ethernet transceiver, a Universal Serial Bus (USB) transceiver, or similar transceiver configurable to communicate via a wire, a twisted pair of wires, a

coaxial cable, an optical link, a fiber-optic link, or other physical connection to a wireline network.

In some embodiments, the network communications interface module **202** can be configured to provide reliable, secured, compressed, and/or authenticated communications. For each communication described herein, information for ensuring reliable communications (e.g., guaranteed message delivery) can be provided, perhaps as part of a message header and/or footer (e.g., packet/message sequencing information, encapsulation header(s) and/or footer(s), size/time information, and transmission verification information such as cyclic redundancy check (CRC) and/or parity check values). Communications can be compressed and decompressed using one or more compression and/or decompression algorithms and/or protocols such as, but not limited to, one or more lossless data compression algorithms and/or one or more lossy data compression algorithms. Communications can be made secure (e.g., be encoded or encrypted) and/or decrypted/decoded using one or more cryptographic protocols and/or algorithms, such as, but not limited to, DES, AES, RSA, Diffie-Hellman, and/or DSA. Other cryptographic protocols and/or algorithms can be used as well or in addition to those listed herein to secure (and then decrypt/decode) communications.

The one or more processors **203** can include one or more general purpose processors and/or one or more special purpose processors (e.g., digital signal processors, application specific integrated circuits, etc.). The one or more processors **203** can be configured to execute computer-readable program instructions **206** that are contained in the data storage **204** and/or other instructions as described herein.

The data storage **204** can include one or more computer-readable storage media that can be read or accessed by at least one of the processors **203**. The one or more computer-readable storage media can include volatile and/or non-volatile storage components, such as optical, magnetic, organic or other memory or disc storage, which can be integrated in whole or in part with at least one of the one or more processors **203**. In some embodiments, the data storage **204** can be implemented using a single physical device (e.g., one optical, magnetic, organic or other memory or disc storage unit), while in other embodiments, the data storage **204** can be implemented using two or more physical devices.

Computer-readable storage media associated with data storage **204** and/or other computer-readable media described herein can also include non-transitory computer-readable media such as computer-readable media that stores data for short periods of time like register memory, processor cache, and random access memory (RAM). Computer-readable storage media associated with data storage **204** and/or other computer-readable media described herein can also include non-transitory computer readable media that stores program code and/or data for longer periods of time, such as secondary or persistent long term storage, like read only memory (ROM), optical or magnetic disks, compact-disc read only memory (CD-ROM), for example. Computer-readable storage media associated with data storage **204** and/or other computer-readable media described herein can also be any other volatile or non-volatile storage systems. Computer-readable storage media associated with data storage **204** and/or other computer-readable media described herein can be considered computer readable storage media for example, or a tangible storage device.

The data storage **204** can include computer-readable program instructions **206** and perhaps additional data. In some embodiments, the data storage **204** can additionally include storage required to perform at least part of the herein-described techniques, methods (e.g., method **800**), and/or at least part of the functionality of the herein-described devices and networks.

FIG. **2**B depicts a network **106** with computing clusters **209***a*, **209***b*, and **209***c* in accordance with an example embodiment. In FIG. **2**B, functions of activity content server **102**, activity assistant server **108**, user account datastore **110**, and/or universal activity datastore **112** can be distributed among three computing clusters **209***a*, **209***b*, and **208***c*. The computing cluster **209***a* can include one or more computing devices **200***a*, cluster storage arrays **210***a*, and cluster routers **211***a* connected by local cluster network **212***a*. Similarly, computing cluster **209***b* can include one or more computing devices **200***b*, cluster storage arrays **210***b*, and cluster routers **211***b* connected by local cluster network **212***b*. Likewise, computing cluster **209***c* can include one or more computing devices **200***c*, cluster storage arrays **210***c*, and cluster routers **211***c* connected by a local cluster network **212***c*.

In some embodiments, each of computing clusters **209***a*, **209***b*, and **209***c* can have an equal number of computing devices, an equal number of cluster storage arrays, and an equal number of cluster routers. In other embodiments, however, some or all of computing clusters **209***a*, **209***b*, and **209***c* can have different numbers of computing devices, different numbers of cluster storage arrays, and/or different numbers of cluster routers. The number of computing devices, cluster storage arrays, and cluster routers in each computing cluster can depend on the computing task or tasks assigned to each computing cluster.

In computing cluster **209***a*, for example, computing devices **200***a* can be configured to perform various computing tasks of activity content server **102**. In one embodiment, the various functionalities of activity content server **102** can be distributed among one or more of the computing devices **200***a*. For example, some of these computing devices can be configured to provide part or all of a first set of content while the remaining computing devices can provide part or all of a second set of content. Still other computing devices of the computing cluster **209***a* can be configured to communicate with activity assistant server **108**. Computing devices **200***b* and **200***c* in computing clusters **209***b* and **209***c* can be configured the same or similarly to the computing devices **200***a* in computing cluster **209***a*.

On the other hand, in some embodiments, computing devices **200***a*, **200***b*, and **200***c* each can be configured to perform different functions. For example, computing devices **200***a* and **200***b* can be configured to perform one or more functions of user-account datastore **110**, and the computing devices **200***c* can be configured to perform one or more functions of activity assistant server **108**.

Cluster storage arrays **210***a*, **210***b*, and **210***c* of computing clusters **209***a*, **209***b*, and **209***c* can be data storage arrays that include disk array controllers configured to manage read and write access to groups of hard disk drives. The disk array controllers, alone or in conjunction with their respective computing devices, can also be configured to manage backup or redundant copies of the data stored in the cluster storage arrays to protect against disk drive or other cluster storage array failures and/or network failures that prevent one or more computing devices from accessing one or more cluster storage arrays.

Similar to the manner in which the functions of activity content server **102**, activity assistant server **108**, user account datastore **110**, and/or universal activity datastore **112** can be distributed across computing devices **200***a*, **200***b*, and **200***c* of respective computing clusters **209***a*, **209***b*, and **209***c*, various active portions and/or backup/redundant portions of these

components can be distributed across cluster storage arrays **210***a*, **210***b*, and **210***c*. For example, some cluster storage arrays can be configured to store data for activity assistant server **108**, while other cluster storage arrays can store data for activity content server **102**. Additionally, some cluster storage arrays can be configured to store backup versions of data stored in other cluster storage arrays.

The cluster routers **211***a*, **211***b*, and **211***c* in the computing clusters **209***a*, **209***b*, and **209***c* can include networking equipment configured to provide internal and external communications for the computing clusters. For example, the cluster routers **211***a* in the computing cluster **209***a* can include one or more internet switching and/or routing devices configured to provide (i) local area network communications between the computing devices **200***a* and the cluster storage arrays **201***a* via the local cluster network **212***a*, and/or (ii) wide area network communications between the computing cluster **209***a* and the computing clusters **209***b* and **209***c* via the wide area network connection **213***a* to the network **106**. The cluster routers **211***b* and **211***c* can include network equipment similar to the cluster routers **211***a*, and the cluster routers **211***b* and **211***c* can perform similar networking functions for the computing clusters **209***b* and **209***b* that the cluster routers **211***a* perform for the computing cluster **209***a*.

In some embodiments, computing tasks and stored data associated with activity content server **102**, activity assistant server **108**, user account datastore **110**, and/or universal activity datastore **112** can be distributed across the computing devices **200***a*, **200***b*, and **200***c* based at least in part on the processing requirements for functions of activity content server **102**, activity assistant server **108**, user account datastore **110**, and/or universal activity datastore **112**, the processing capabilities of the computing devices **200***a*, **200***b*, and **200***c*, the latency of the local cluster networks **212***a*, **212***b*, and **212***c*, the wide area network connections **213***a*, **213***b*, and **213***c*, and/or other factors that can contribute to the cost, speed, fault-tolerance, resiliency, efficiency, and/or other design goals of the overall system architecture.

Additionally, the configuration of the cluster routers **211***a*, **211***b*, and **211***c* can be based at least in part on the data communication requirements of the computing devices and cluster storage arrays, the data communications capabilities of the network equipment in the cluster routers **211***a*, **211***b*, and **211***c*, the latency and throughput of the local cluster networks **212***a*, **212***b*, **212***c*, the latency, throughput, and cost of the wide area network connections **213***a*, **213***b*, and **213***c*, and/or other factors that can contribute to the cost, speed, fault-tolerance, resiliency, efficiency and/or other design goals of the system architecture.

Example User Interface for Activity Assistant

FIG. **3**A is a block diagram illustrating features of a user interface, according to an example embodiment. In particular, activity-assistant user interface **300** may be displayed via a client device once a user has logged in to their activity-assistant account, and may allow a user to interact with an activity assistant. While only one screen of the activity-assistant user interface **300** is shown, it should be understood that the activity-assistant user interface may include other screens, which provide additional functionality, without departing from the scope of the invention. As shown, activity-assistant user interface **300** includes a personalized activity panel **302**, an activity feed **304** that displays activities that have been added, done, and/or recently updated by friends of the user (or members of the user's social graph and/or social network), a search/add bar **306**, and a context panel **308**. Further, context panel **308** includes a number of input mechanisms **310** A-C via which a user can input context signals.

The tab menu panel **301** acts as a menu selection bar, and may determine the content of the remainder of the user interface **300**. As shown in FIG. **3**A, the Activities tab is currently selected, and as a result, the personalized activity panel **302** and the activity feed **304** are displayed. The Timeline tab may bring up a time-based ordering of activities. The News tab may bring up a listing of activities, announcements, and/or actions (e.g., "today your friend did the activity 'watch movie' that you inspired him/her to add") of other users with which the current user is associated. The profile tab may allow the current user to modify settings, such as login preferences, display settings, and/or how the current user's information appears to other users (name, privacy settings, etc.), among others. In some embodiments, a subset of the tabs illustrated in FIG. **3**A may be provided, and in other embodiments, a superset of the tabs may be provided.

The context panel **308** provides an interactive mechanism for users to provide context signal data that describes a "user context" (e.g. to provide signals indicative of the user's intent, interest, mood, state-of-mind, experience, perception, associations with other users, etc.). In the illustrated example, input mechanism **310**A on the left of context panel **308** allows a user to signal their mood (e.g., "up for anything", "lazy", "productive", "social", etc.). The input mechanism **310**B in the center of context panel **308** allows a user to signal a location (e.g., "current location", "home", "work", "stadium", etc.). Further, input mechanism **310**C on the right of context panel **308** allows a user to signal a time or timeframe (e.g., "now", "tomorrow", "tonight", "next Wednesday morning", "2:00 AM CST", "9:00 PM EST on Saturday", etc.). Other input mechanisms are possible as well.

While the context information provided via the input mechanisms of the context panel **308** may be referred to as "signals" from the user, it should be understood that, programmatically, this information may take the form of user-specific parameters that are associated with the user's activity account. As such, the data provided via input mechanisms **310**A-C may be stored in a user-account database. For example, referring back to FIG. **1**, data from input mechanisms **310**A-C may be stored as user-specific parameters in user-account database **110**. It is also possible that activity assistant server **108** may be fed data or may pull data directly from input mechanisms **310** in real-time.

The context signal data acquired from the context panel **308** (e.g., user-specific parameters related to "user context") may be combined by the activity assistant (e.g., activity-assistant server **108** and/or activity content server **102**) with global parameters of a given activity, other user-specific parameters, and/or data from other sources, in order to derive signals indicative of activity-importance of the given activity to the user. In this context, the "signals" are the information relative to the importance of the activity that is derived from the data (e.g., the user-specific parameters, global parameters, etc.). As such, the activity assistant may interpret a user-parameter as a signal in and of itself.

For instance, the user's mood (provided via input mechanism **310**A) may be interpreted as a signal that makes any number of activities more or less important for the user. As a specific example, if the user's mood is "lazy", the activity "watching a movie" may become more important than it otherwise would be (as global parameters may indicate that "lazy" is a mood associated with the "watching a movie" activity). On the other hand, the activity "go to the gym" may become less important than it otherwise would be (as global parameters of "watching a movie" do not typically include "lazy" as an associated mood, or may in fact indicate that "lazy" is a mood that is likely incompatible with this activity).

The activity assistant may also derive more complex signals by evaluating the relationships and/or interactions between user-specific parameters, global parameters, and/or other data items. To provide an example, a user may have provided a "love being outdoors" signal, which may be stored in the user's account as a user-specific parameter (note that a user interface input mechanism not shown on the user interface **300**, but is contemplated as being available). At a given point in time, the user also may have set their mood to "active" via input mechanism **310**A, set their location to "current location" via input mechanism **310**B, and set their time to "tomorrow afternoon". The activity assistant may interpret this data as including a signal that the user would like to do something active tomorrow afternoon at the same place they are currently located.

Further, the activity assistant may use other data sources to determine other relevant signals, such as the weather forecast for the next day at the user's current location or the location that the user will likely be at the next day. Tomorrow afternoon's weather forecast may thus be a signal, which can be combined with the signal derived from the user-specific parameters to provide a more-refined signal that, for example, outdoor fitness or sporting activities near the user's location should always be favored over indoor fitness or sporting activities near the user's location, unless the tomorrow afternoon's forecast is for rain, in which case the amount by which outdoor activities are favored over indoor activities may be reduced (or indoor activities may actually be favored). For instance, combining all of this information, the activity assistant may increase the importance of active outdoor activities (e.g., "go for a run", "play flag football", etc.) to a greater extent when the forecast is for sunny weather, than when the forecast is for rain or snow.

The activity assistant may apply signal-based techniques, such as those described herein, to assess activity-importance for a number of activities and the importance of these activities relative to one another. This technique may be employed to provide the user with various functions that are tailored to the user's context.

For example, personalized activity panel **302** may display intelligently selected and ordered activities from a pool of activities including the activities a user has added to their account and suggested activities that have been selected for a user. For example, a number of suggested activities may be determined based on factors such as user preferences, signals from the context panel, global parameters of potential activities, activities that have been added and/or done by friends of the user, and/or activities that have been added and/or done by the user in the past, among others. These suggested activities may then be combined with the activities a user has already added to create a pool of potential activities for the personalized activity panel **302**. Then, to determine which specific activities to display in personalized activity panel **302**, the activity assistant may quantify the importance of each activity (e.g., by evaluating signals for each activity), so that the activities that are most important to the user are displayed.

Note that personalized activity panel **302** may visually differentiate between activities that a user has already added to their account, and suggested activities. For example, the "Watch Movie" activity is displayed with a dark background and white text to indicate that it is a suggested activity (and that the user may thus wish to add it), whereas the other activities listed in personalized activity panel **302** all have a white background with black text, thus indicating that the user has already added these activities.

Further, the evaluation of importance may also be applied in the process of determining which activities should be displayed in the activity feed **304** (and possibly the order in which those activities are displayed). In particular, a certain number of the most recently-added and updated activities may be evaluated based on signals such as those described above, and the most important of the recent activities may be displayed (possibly in the order of importance. Alternatively, it should be understood that activity feed **304** may simply display activities in a time-wise manner as they are added/updated/completed, without adjusting based on the user's context. In a similar manner, search results (not shown) for an activity search via search/add bar **306** may be displayed based at least in part on importance of the activities located in the search, or may simply be displayed in an order according to one of the many well-known search techniques.

FIG. **3**B is another block diagram illustrating features of a user interface, according to an example embodiment. In particular, FIG. **3**B illustrates an alternative activity-assistant user interface **350**, which may be displayed via a client device once a user has logged in to their activity-assistant account. Activity-assistant user interface **350** includes some of the same UI elements as activity-assistant user interface **300** of FIG. **3**A (e.g., search/add bar **306** and context panel **308** including a number of input mechanisms **310** A-C). However, activity-assistant user interface **350** includes an activity list **352** and a suggested activity list **354**.

In this embodiment, activity list **352** may include only activities that a user has added to their account. Thus, by evaluating signals for each activity a user has added to their account, the activity assistant can determine which activities should be displayed in activity list **352** (and the order in which those activities should be displayed).

Furthermore, suggested activity list **354** may display only suggested activities (which have not yet been added by the user.) Accordingly, the importance of specific activities may also be a factor in the process of determining which activities should be displayed in the suggested activity list **354** (and the order of those activities).

In some embodiments, a user may create a new activity using the activity assistant user interface, as shown in FIG. **4**. The creation of a new activity, as shown in display **401**, may create a new global activity parameter for use with the activity assistant. Display **402** shows an example dialog for entering data related to the newly created activity. Additional users can be informed about this newly created activity using the "Add (public)" button shown in display **402**. FIG. **4** shows display **403** generated with the "Don't Add" button shown in FIG. **4** after adding one or more additional users.

In other embodiments, a user may enter a user-specific parameter, such as a lazy mood, into the activity-assistant user interface, as shown in display **501** of FIG. **5**. When a user selects a parameter, a signal is generated causing the activity assistant to change the activity list in response to a chosen user-specific parameter. Display **502** shows the updated activity list after entering the "lazy mood" parameter. The updated activity list shows two new activities from those shown in display **501**: a "Hotpot Wednesdays" activity and an "Eat Ramen" activity. FIG. **5** shows list **503** with two activities not indicated in the updated activity list shown in display **502**, since the illustrated "Email Marisa" and "Pick up wrapping paper" activities do not match the "lazy mood" parameter.

In other embodiments, the activity assistant may keep a timeline of activities based on parameters set by a user using the activity assistant user interface, as shown in display **601** of FIG. **6**. For example, some activities have been discarded, while others have been recently done. Further, the timeline may identify activities to be completed as soon as possible ("ASAP") and identify upcoming activities. In some embodi-

ments, such as display **602**, the timeline may also include activities with less specific time-parameters, such as unscheduled activities, activities that have been "snoozed," and activities that may be of a low priority for completion "someday."

In some embodiments, the activity assistant may keep a timeline of activities based on parameters set by a user using the activity assistant user interface. As shown in FIG. **7**, when an activity is either "done" or "discarded" as shown in display **701**, may be selected as re-added to a users timeline of possible activities using the "Re-add" button shown in display **702**. For example, a user may want to take a specific tour again or see a movie for a second time. The activity that once was "done" may be returned to the list of activities. Additionally, when an activity is selected, the activity-assistant user interface may return global parameter data relating to the specific activity. For example, a user could see other user who completed an activity. Moreover, a user can see who "inspired" him to add the activity and who he "inspired" to add the activity.

In some embodiments, a user may add additional users to a specific activity using the activity assistant user interface, as shown in FIG. **8**. If a specific user thinks additional users may be interested in an activity, he can "inspire" the additional users to add the specific activity to their list of activities, as shown in display **802** of FIG. **8**.

In some embodiments, a user may add additional users to a specific activity using the activity assistant user interface, as shown in FIG. **9**, wherein the user adding additional users was "inspired" by a first user. If a specific user thinks additional users may be interested in an activity, he can "inspire" the additional users to add the specific activity to their list of activities. Thus, one activity can be propagated to multiple users.

In some embodiments, a user may use the activity-assistant user interface for an activity that has been marked "done", as shown in FIG. **10**. Upon marking something "done," the activity assistant may prompt a user for the timeframe in which the activity may be repeated. For example, a user may cut his hair once a month. The activity assistant may generate a signal relating to the time the activity should appear on a users activity list.

In some embodiments, a user may use the activity-assistant user interface for an activity that has been marked "done", as shown in FIG. **11**. Upon marking something "done" in display **1101**, the activity assistant in display **1102** may permit a user to recommend an activity and provide a "heads-up" to another user, schedule a repetition of the activity, or mark that this activity should not be performed again. Display **1103** shows a subsequent view of the activity with a "Done" indication **1104**.

FIG. **12** depicts an embodiment where an activity is viewed by a current user "Alice" in her profile, as shown in display **1201**. The activity was perhaps suggested to Alice by a first user "Andrea" as shown in display **1202**, or perhaps otherwise found by Alice (e.g., via search or self-generation). The current user Alice may have the option to add the activity to their list of activities and/or mark the activity as "done." If the current user Alice acts in response to a suggestion from the first user Andrea, the activity assistant may indicate that the first user Andrea "inspired" the current user to perform the activity, as shown in display **1203** of FIG. **12**.

In some embodiments, the activity assistant user interface may display an activity that many users have added, as shown in FIG. **13**. A user may be interested in other users who have added the activity. The activity-assistant user interface includes a link to the profiles of other users who have added the same event.

In some embodiments, a user may change the priority of an activity by either delaying the activity or marking is ASAP using the activity assistant user interface, as shown in FIG. **14**. When an activity is delayed, a signal is sent to the activity assistant to return the activity to the activity list at a later date. For example, if a user doesn't feel like a specific restaurant he may "snooze," delay, the visit to the restaurant and the activity assistant may suggest the restaurant at a later date. On the other hand, a user may have an important job interview and want a haircut promptly, thus he may select ASAP and a corresponding signal will be generated telling the activity assistant to increase the priority of a haircut.

In some embodiments, a user may change the priority of an activity by either delaying the activity or reminding the user to complete the activity using the activity assistant user interface, as shown in FIG. **15**. When an activity is delayed, a signal is sent to the activity assistant to return the activity to the activity list at a later date. For example, if a user doesn't feel like a specific restaurant he may "snooze," delay, the visit to the restaurant and the activity assistant may suggest the restaurant at a later date. The user may choose from a range of time frames, based on how long he is willing to delay the activity. On the other hand, a user may have an important job interview and want a haircut promptly, thus he may want to be reminded ASAP. A signal will be generated telling the activity assistant to increase the priority of a haircut based on the user's specified time frame.

In some embodiments, the activity assistant user interface may display a "private" activity as shown in FIG. **16**. A user may want to create an activity and limit the number of people who can see the activity. In one embodiment, a user may want the activity only visible to him, thus nobody else will be able to see or locate the activity, as shown in display **1601** of FIG. **16**. On the other hand, a user may want to keep and activity private, but have an exclusive list of who can add the activity and see the details, such as shown in display **1602** of FIG. **16**. For example, if a user is throwing a surprise party, he may add all guests of the party, but exclude the person for whom the party is being thrown. Thus, the activity will not be seen by that specific user who was excluded, but the activity will appear for the other invitees. Display **1603** of FIG. **16** shows an example view of the activity for one of the other invitees, Max.

In some embodiments, the activity assistant user interface may display menus generated by the activity-assistant user interface for a suggested activity, as shown in FIG. **17**. Display **1701** displays one or more "justifications" for a suggested activity. When an activity is suggested, a user may want to add the activity to his list or mark the activity "done" as shown in display **1702**. Additionally, he may also want to mark the activity as "not interested" as shown in display **1702** so the activity assistant doesn't suggest the activity in the future. After adding the suggested activity, the user can mark the activity as "done" as shown in display **1703**.

In some embodiments, the activity assistant user interface may display a user's profile within the activity-assistant user interface, as shown in FIG. **18**. In display **1801**, an example profile is shown including a user's "following" users (e.g., users that have a relationship or an association with the user), the user's top activities, current activity list, future activities, and historical activities. One or more users may be interested in what activities other users participate. By "following" a specific user, a following user can see what public activities the specific user adds and does and see what activities are suggested to the specific user. This may allow the following user to add some activities to his/her own activity list. Further, the following user can contact the specific user and send

messages, such as heads-up for activities, to the specific user. By sending a heads-up message to the specific user, the following user can inform, remind, and/or suggest a given activity to the specific user

As further shown in FIG. **18**, display **1802** shows an example "life list" for a user includes one or more activities. The display **1802** is understood as an importance based display of one or more activities, in which the display **1802** includes a ranking of the activities for display based at least on information stored in a profile for a user. In some configurations, the display **1802** includes a ranking of the activities for display based on the user's profile similar to the context menu and activity list described above in FIG. **3** or as described in FIG. **21** below. Additionally, FIG. **18** includes display **1803** that shows a history of activities for the user.

In some embodiments, the activity assistant user interface may be viewed by a user, as shown in FIG. **19**. The suggested activity list shown in display **1901** is created by the activity assistant, based on the user-specific parameters a user has entered. When a user changes a user-specific parameter, a signal is generated and the activity assistant may modify the activity list accordingly. Additionally, the activity-assistant user interface may include additional activities not on a user's activity list as shown in display **1902**, but that the user may be interested in adding.

In some embodiments, a user may use the activity assistant user interface **2000** to enter an activity and the activity assistant user interface may return a list of known activities relating to the users query, as shown in FIG. **20**. For example, if a user wants pizza as shown in display **2001**, the activity assistant user interface may return a list of activities that involve pizza; for example, ordering pizza delivery or visiting a pizza restaurant.

FIG. **21** depicts an example embodiment of a user interface **2100** for a user profile **2101** for a user with a self-curated list of activities **2102**. The self-curated list **2102** can inform other users about the user, such as the user's current list of top 5 activities or a "life list" with activities that may be goals, dreams, and/or aspirations for the user (e.g., see the pyramids, take Dad to baseball game, etc.) In some configurations, the user interface **2100** is configured to generate an importance based display (e.g., a self-curated list) of the one or more activities in which a ranking is based at least in part on information stored in a profile for a user. In one example, the profile for the user includes at least a mood parameter, a location parameter, and a time-related parameter. If a viewing user reviews the user's profile, suggested activities for both the viewing user and the user can be shown, such as indicated in display **2103**. In some cases, these activities are activities both users have indicated they want to complete. Display **2103** also shows a shared history of activities that both users have completed to remind and, perhaps quickly add new activities for both users.

FIG. **22** conceptually illustrates an example process **2200** for performing different operations in connection with the aforementioned user interfaces. The process **2200** begins at **2205** by providing a first activity based on received user input (e.g., as shown in FIG. **4**). The first activity is included in several activities stored in a global activity database (e.g., global activity database **112** in FIG. **1**) and each activity of the several activities includes several parameters. For instance, the parameters include a status parameter and a list of associated users.

The process **2200** at **2210** provides, for display, in a single-activity UI (e.g., as shown in FIG. **7**), the first activity and information related to the list of users associated with the first activity. The information related to the list of users includes information for the first activity and information for each user on the list of users in which the information for each user includes a user identifier (e.g., a name of the user).

The process **2200** at **2215** provides, for display, in an activity-list UI (e.g., as shown in FIGS. **3**, **6** and **19**), one or more activities of the several activities according to a ranking determined at least in part by one or more parameters of the displayed one or more activities.

The process **2200** at **2220** receives, from an activity-search UI (as shown in FIGS. **3**, **4**, **5** and **20**), at least one activity-search keyword for generating a query of the activities based on the activity-search keyword. The process **2200** at **2225** receives one or more search-related activities of the activities ordered according to a search-related ranking based on the activity-search keyword in which the activity-list UI displays the one or more search-related activities. The process **2200** then ends.

CONCLUSION

With respect to any or all of the ladder diagrams, scenarios, and flow charts in the figures and as discussed herein, each block and/or communication may represent a processing of information and/or a transmission of information in accordance with example embodiments. Alternative embodiments are included within the scope of these example embodiments. In these alternative embodiments, for example, functions described as blocks, transmissions, communications, requests, responses, and/or message may be executed out of order from that shown or discussed, including substantially concurrent or in reverse order, depending on the functionality involved. Further, more or fewer blocks and/or functions may be used with any of the ladder diagrams, scenarios, and flow charts discussed herein, and these ladder diagrams, scenarios, and flow charts may be combined with one another, in part or in whole.

A block that represents a processing of information may correspond to circuitry that can be configured to perform the specific logical functions of a herein-described method or technique. Alternatively or additionally, a block that represents a processing of information may correspond to a module, a segment, or a portion of program code (including related data). The program code may include one or more instructions executable by a processor for implementing specific logical functions or actions in the method or technique. The program code and/or related data may be stored on any type of computer readable medium such as a storage device including a disk or hard drive or other storage medium.

The computer readable medium may also include non-transitory computer readable media such as computer-readable media that stores data for short periods of time like register memory, processor cache, and random access memory (RAM). The computer readable media may also include non-transitory computer readable media that stores program code and/or data for longer periods of time, such as secondary or persistent long term storage, like read only memory (ROM), optical or magnetic disks, compact-disc read only memory (CD-ROM), for example. The computer readable media may also be any other volatile or non-volatile storage systems. A computer readable medium may be considered a computer readable storage medium, for example, or a tangible storage device.

Moreover, a block that represents one or more information transmissions may correspond to information transmissions between software and/or hardware modules in the same

physical device. However, other information transmissions may be between software modules and/or hardware modules in different physical devices.

It should be understood that for situations in which the systems and methods discussed herein collect personal information about users, the users may be provided with an opportunity to opt in/out of programs or features that may collect personal information (e.g., information about a user's preferences or a user's contributions to social content providers). In addition, certain data may be anonymized in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be anonymized so that the no personally identifiable information can be determined for the user and so that any identified user preferences or user interactions are generalized (for example, generalized based on user demographics) rather than associated with a particular user.

While various aspects and embodiments have been disclosed herein, other aspects and embodiments will be apparent to those skilled in the art. The various aspects and embodiments disclosed herein are for purposes of illustration and are not intended to be limiting, with the true scope and spirit being indicated by the following claims.

What is claimed is:

1. A method comprising:

providing, for display in an activity-list user interface (UI), a plurality of activities stored in a global activity database, wherein each activity of the plurality of activities is defined by a plurality of parameters and is associated with one or more associated users, and wherein the plurality of activities are ordered according to a ranking determined based on one or more of the plurality of parameters; and

providing for display in a single-activity user interface (UI) based on received user input:

a first activity from the plurality of activities;

information related to the one or more associated users associated with the first activity, wherein the information includes a number of the one or more associated users and at least one user identifier for the one or more associated users; and

a first element configured to, upon selection, provide for display a messaging user interface (UI) overlaid on the single-activity UI such that a portion of the single-activity UI is visible and a portion of the single-activity UI is not visible, wherein the first element is configured to, upon selection, display in the messaging UI:

one or more selectable elements, wherein each of the one or more selectable elements corresponds to a respective user other than the one or more associated users, and

a second element configured to, upon selection, send a message about the first activity to users corresponding to selected ones of the one or more selectable elements.

2. The method of claim **1**, wherein the single-activity UI further comprises:

a parameter-entry display configured to select a parameter of the plurality of parameters for the first activity and to send a signal to the first activity corresponding to the selected parameter.

3. The method of claim **1**, wherein the single-activity UI further comprises:

a location display configured to display information related to a location of the first activity.

4. The method of claim **1**, wherein the plurality of parameters comprises a status parameter, and wherein the single-activity UI further comprises:

a status indicator configured to display a status based on the status parameter of the first activity.

5. The method of claim **4**, wherein the single-activity UI further comprises:

a status-entry display configured to, upon selection, send a signal to change the status indicator of the first activity.

6. The method of claim **1**, wherein the plurality of parameters comprises status parameters and time-related parameters, and wherein the activity-list UI further comprises:

a timeline display configured to generate a time-based display of one or more activities from the plurality of activities, wherein the timeline display includes the ranking of the one or more activities for display based at least in part on the status parameters of the one or more activities or the time-related parameters of the one or more activities.

7. The method of claim **6**, wherein the generated time-based display of the one or more activities includes at least one from an activity identified to be completed as soon as possible, an upcoming activity, an unscheduled activity, a delayed activity, and a low priority activity.

8. The method of claim **1**, wherein the activity-list UI further comprises:

a context display configured to generate an importance based display of one or more activities from the plurality of activities, wherein the context display includes the ranking of the one or more activities for display based at least in part on information stored in a profile for a user, wherein the profile for the user comprises at least a mood parameter, a location parameter, and a time-related parameter.

9. The method of claim **1**, wherein the plurality of parameters comprises a status parameter, and wherein the status parameter of a corresponding activity indicates that the corresponding activity is completed, active or in-progress.

10. The method of claim **1**, further comprising:

providing for display one or more users that have added the first activity.

11. The method of claim **1**, further comprising:

providing for display a private activity from the plurality of activities, wherein the private activity is limited for viewing to a specified one or more users.

12. The method of claim **1**, further comprising:

providing for display one or more suggested activities based on one or more user-specific parameters.

13. The method of claim **1**, further comprising:

providing for display a self-curated list of one or more activities, wherein the self-curated list indicates one or more goals for a user.

14. The method of claim **1**, further comprising:

providing for display a shared history of one or more activities, wherein the shared history includes at least one activity that at least two different users have completed.

15. The method of claim **1**, wherein the second element is further configured to provide for display a number corresponding to a number of the selected ones of the one or more selectable elements.

16. A system, comprising:

one or more processors configured to generate a user interface, the user interface comprising:

an activity-list display configured to display a plurality of activities stored in a global activity database, wherein each activity of the plurality of activities is defined by a plurality of parameters and is associated with one or

more associated users, and wherein the plurality of activities are ordered according to a ranking determined based on one or more of the plurality of parameters; and

a single-activity display configured to display based on received user input:

a single activity from the plurality of activities;

information related to the one or more associated users associated with the single activity, wherein the information includes a number of the one or more associated users and at least one user identifier for the one or more associated users; and

a first element configured to, upon selection, provide for display a messaging user interface (UI) overlaid on the single-activity display such that a portion of the single-activity display is visible and a portion of the single-activity display is not visible, wherein the first element is configured to, upon selection, display in the messaging UI:

one or more selectable elements, wherein each of the one or more selectable elements corresponds to a respective user other than the one or more associated users, and

a second element configured to, upon selection, send a message about the single activity to users corresponding to selected ones of the one or more selectable elements.

17. The system of claim **16**, wherein the plurality of parameters comprises a status parameter, and wherein the single-activity display further comprises:

a parameter-entry display configured to select a parameter of the plurality of parameters for the single activity and to send a signal to the single activity corresponding to the selected parameter;

a location display configured to display information related to a location of the single activity;

a status indicator configured to display a status based on the status parameter of the single activity; and

a status-entry display configured to, upon selection, send a signal to change the status indicator of the single activity.

18. The system of claim **16**, wherein the plurality of parameters comprises status parameters and time-related parameters, and wherein the activity-list display comprises:

a timeline display configured to generate a time-based display of one or more activities from the plurality of activities, wherein the timeline display includes the ranking of the one or more activities for display based at least in part on the status parameters of the one or more activities or the time-related parameters of the one or more activities; and

a life-list display configured to generate an importance based display of the one or more activities, wherein the life-list display includes the ranking of the one or more activities for display based at least in part on information stored in a profile for a user, wherein the profile for the user comprises at least a mood parameter, a location parameter, and a time-related parameter.

19. An article of manufacture including a non-transitory computer-readable medium, having stored thereon program instructions that, upon execution by a computing device, cause the computing device to perform operations comprising:

providing, for display in an activity-list user interface (UI), a plurality of activities stored in a global activity database, wherein each activity of the plurality of activities is defined by a plurality of parameters and is associated with one or more associated users, and wherein the plurality of activities are ordered according to a ranking determined based on one or more of the plurality of parameters; and

providing for display in a single-activity user interface (UI) based on received user input:

a first activity from the plurality of activities;

information related to the one or more associated users associated with the first activity, wherein the information includes a number of the one or more associated users and at least one user identifier for the one or more associated users; and

a first element configured to, upon selection, provide for display a messaging user interface (UI) overlaid on the single-activity UI such that a portion of the single-activity UI is visible and a portion of the single-activity UI is not visible, wherein the first element is configured to, upon selection, display in the messaging UI:

one or more selectable elements, wherein each of the one or more selectable elements corresponds to a respective user other than the one or more associated users, and

a second element configured to, upon selection, send a message about the first activity to users corresponding to selected ones of the one or more selectable elements.

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